Route 1 Multimodal Improvements Study

Public Information Meeting No. 3

Virtual Meeting via GoToWebinar

June 16, 2021

VDOT

Virtual Public Information Meeting in Response to COVID-19

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- ✔ Study information
- ✔ Process for submitting comments
- ✔ Key contacts

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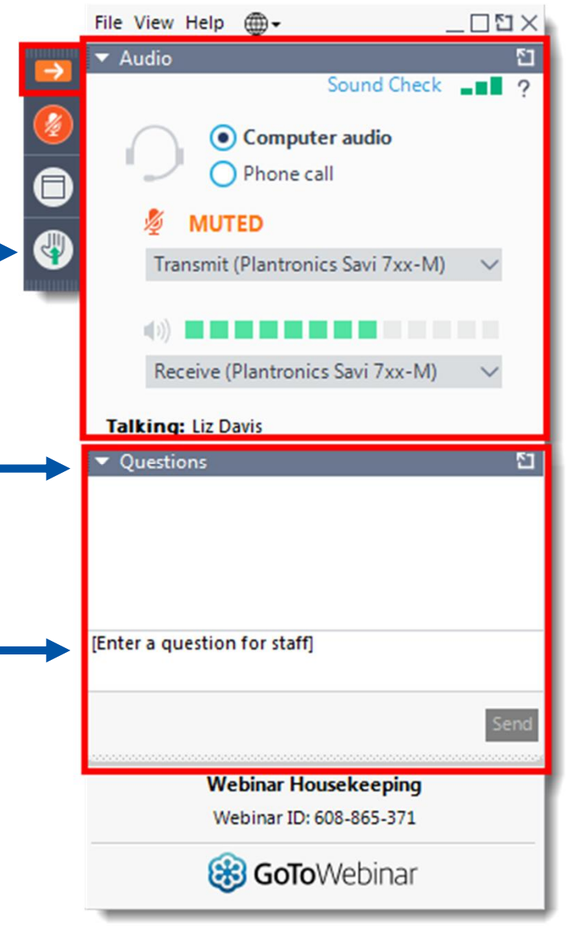


Desktop View

Executive Summary

Route 1 Multimodal Improvements Feasibility Study

Executive Summary

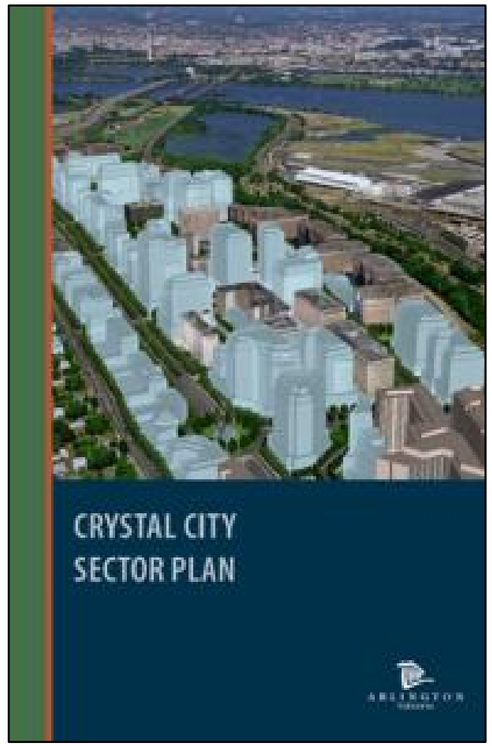
- Agreement between the Commonwealth of Virginia and Amazon includes a transportation project for Route 1 in National Landing to "improve safety, accessibility, and the pedestrian experience crossing Route 1…"
- Feasibility study aims to provide sufficient information to make the best decision on a future project on Route 1 to meet transportation needs with the coming of Amazon and other related development
- The study examines converting Route 1 to an at-grade or elevated urban boulevard or improving the existing elevated roadway from 12th Street to 23rd Street South

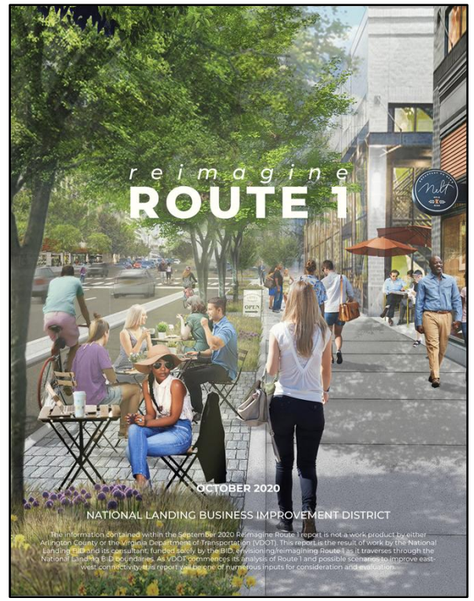
Route 1 Multimodal Improvements Feasibility Study

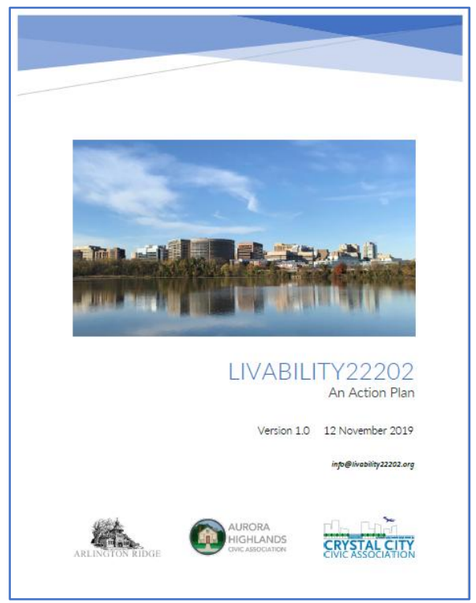
Executive Summary

Guides used to "improve safety, accessibility, and the pedestrian experience crossing Route 1"

- National and current urban design guides, manuals, and other publications
- The 2010 Crystal City Sector Plan lays out the community's vision to transform Crystal City into a more inviting, lively, and walkable community. It includes the transformation of U.S. 1 into an urban boulevard linking Crystal City's east and west neighborhoods.
- The 2020 National Landing BID's "Reimagine Route 1" states: "transform Route 1 into a multi-modal, pedestrian-friendly, and urban-oriented boulevard that unifies the area into a truly walkable, connected, urban downtown."
- The 2019 Livability 22202 Action Plan: one of the key priorities is to "Design and implement better and safer connections across Route 1."
- Together, these documents provide a vision for National Landing to incorporate into a project on Route 1







Route 1 Multimodal Improvements Feasibility Study

Executive Summary

- Findings

Configuration	Pedestrian Safety	Multimodal Traffic Demand	Project Cost	Urban Boulevard	Vision for National Landing
At-Grade Urban Boulevard	Concerns need to be addressed w/ further study	Needs strategy that reduces future traffic volumes	Moderate $180M	Yes	Compatible
Elevated Urban Boulevard (Sector Plan)	Accommodates	Accommodates	High $260M	Yes	Impedes future development of National Landing
Improved Existing Elevated Roadway	Accommodates	Accommodates	Low $5-15M	No	Not compatible

Route 1 Multimodal Improvements Feasibility Study

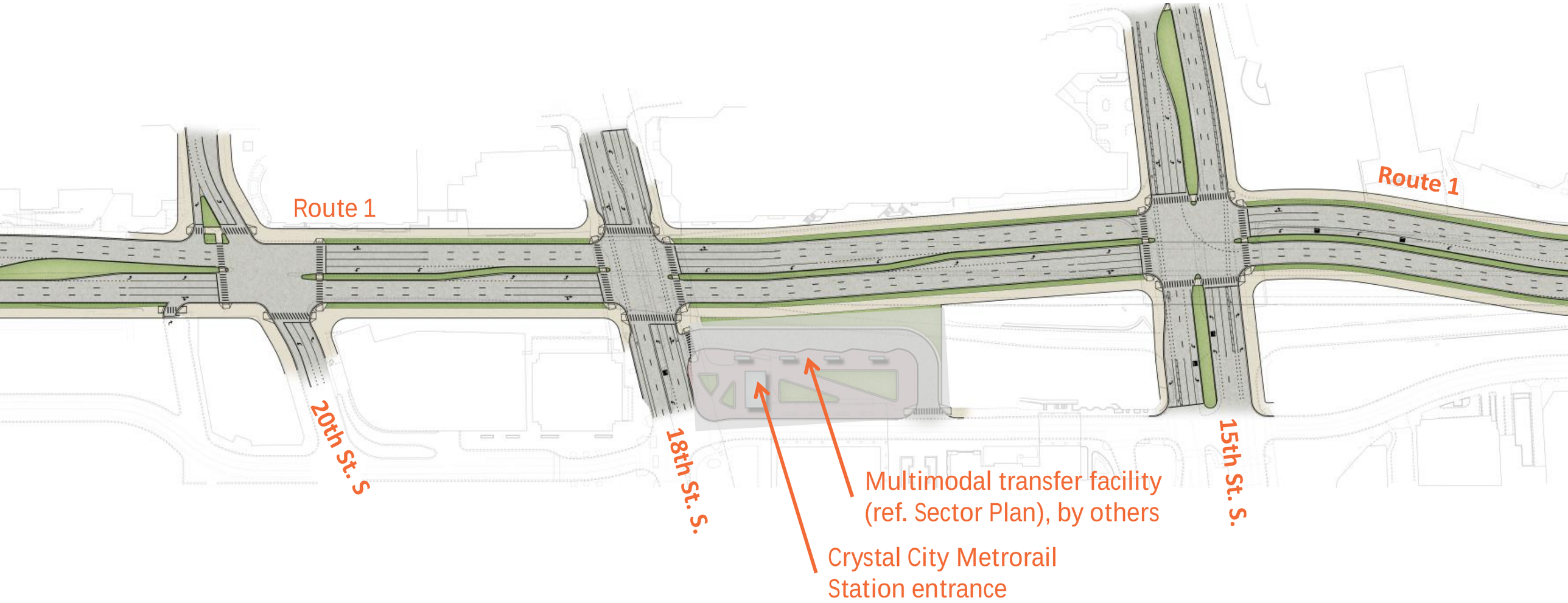
Executive Summary

- Recommendation: Convert Route 1 to an at-grade urban boulevard, with provision for:
  - A Travel Demand Management (TDM) Strategy that reduces future traffic volumes
  - Further study for a separate pedestrian crossing over/under Route 1 at 18th Street, in addition to the at-grade crossings for pedestrians and bicycles

Route 1 Multimodal Improvements Feasibility Study

Executive Summary

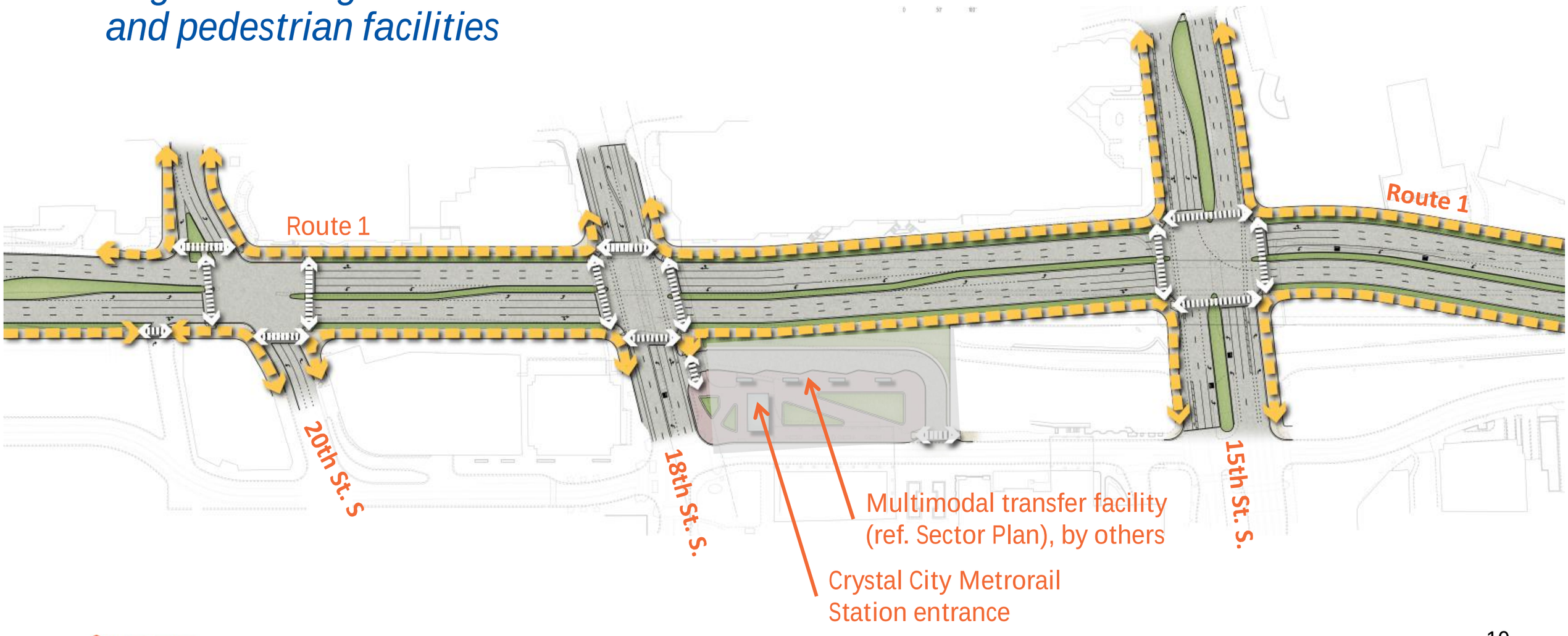
At grade configuration with new multimodal transfer station



Route 1 Multimodal Improvements Feasibility Study

Executive Summary

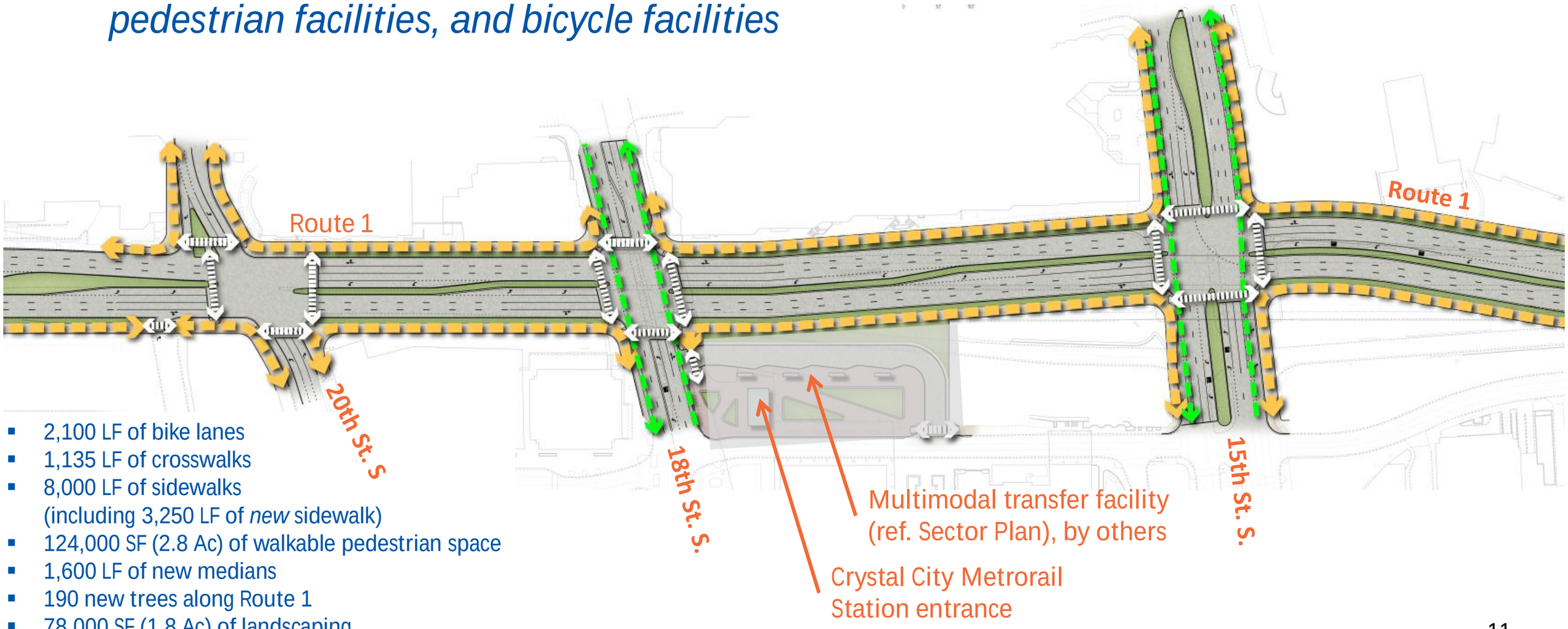
At grade configuration with new multimodal transfer station and pedestrian facilities



Route 1 Multimodal Improvements Feasibility Study

Executive Summary

At grade configuration with new multimodal transfer station, pedestrian facilities, and bicycle facilities



- 2,100 LF of bike lanes
- 1,135 LF of crosswalks
- 8,000 LF of sidewalks
  (including 3,250 LF of *new* sidewalk)
- 124,000 SF (2.8 Ac) of walkable pedestrian space
- 1,600 LF of new medians
- 190 new trees along Route 1
- 78,000 SF (1.8 Ac) of landscaping
- 85,000 SF (1.9 Ac) of pavement removed

At Grade Route 1 – Concept 1 – Perspective

MULTIMODAL IMPROVEMENTS

- Wide buffered sidewalks on each side of Route 1
- Narrowed lanes
- Lower speed limit (30 mph)
- Wide crosswalks for pedestrians & bicycles
- Landscaping alongside travel lanes & median
- Median with pedestrian refuge
- Signals and lighting

Route 1 @ 15th St
looking southwest

At Grade Route 1 – Concept 2 – Perspective

MULTIMODAL IMPROVEMENTS

- Wide buffered sidewalks on each side of Route 1
- Narrowed lanes
- Lower speed limit (30 mph)
- Wide crosswalks for pedestrians & bicycles
- Landscaping alongside travel lanes & median
- Median with pedestrian refuge
- Signals and lighting

Route 1 @ 18th St
looking northwest

At Grade Route 1 – Concept 2 – Pedestrian View

- Wide crosswalks for pedestrians and bicycles
- Landscaping
- Median with pedestrian refuge
- Signals and lighting

Route 1 @ 15th St looking west

At Grade Route 1 – Concept 1 – Pedestrian View

- Wide crosswalks for pedestrians and bicycles
- Landscaping
- Median with pedestrian refuge
- Signals and lighting

Route 1 @ 18th St looking west

Study Overview and Recap

Study Overview

Study Tasks and Schedule

Route 1 Multimodal Improvements in Crystal City

Feasibility Study Status Through March 3, 2021 (Public Information Meeting)

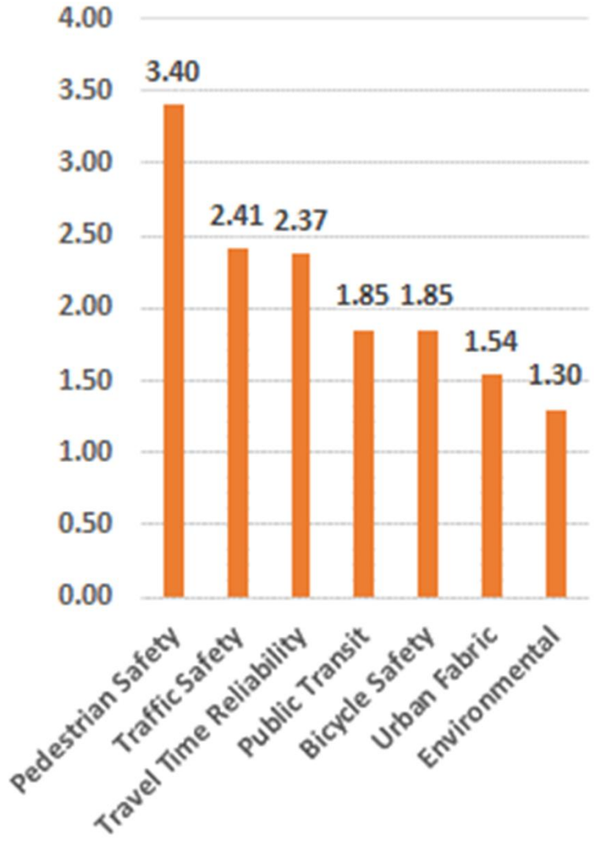
MULTIMODAL IMPROVEMENTS

Multimodal transportation analysis

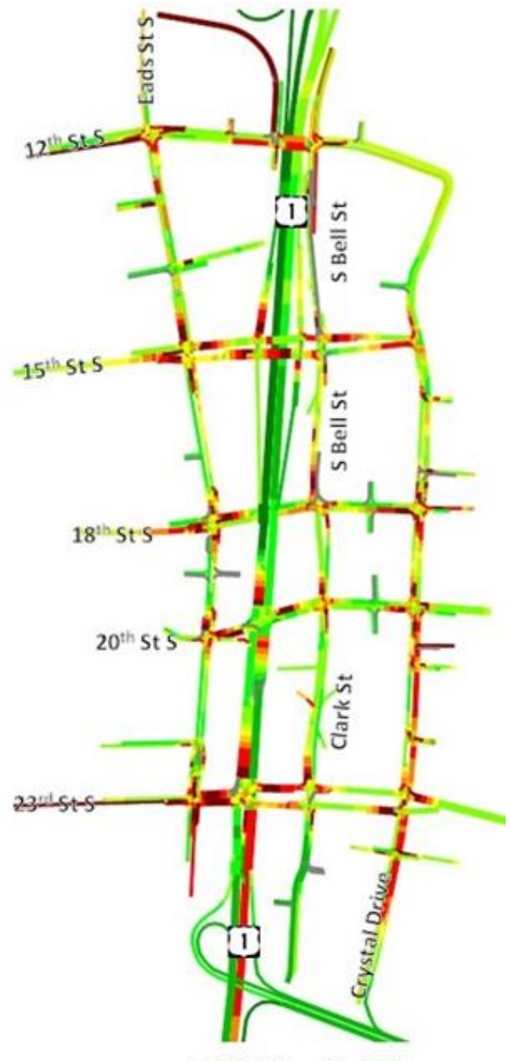
- ✓ Safety analysis
- ✓ Citizen Survey
- ✓ Existing conditions analysis
- ✓ Transportation forecasting for Years 2025 & 2040 (pre-pandemic based on COG regional model)

	Existing	2025	2040
Existing & Projected Volumes	47,000	53,400	60,500

- ✓ Future no-build conditions analysis
- ✓ Selected typical section for study & at-grade/elevated alignment
- ⇨ Future build conditions analysis – *underway*



Design Priorities from Citizen Survey

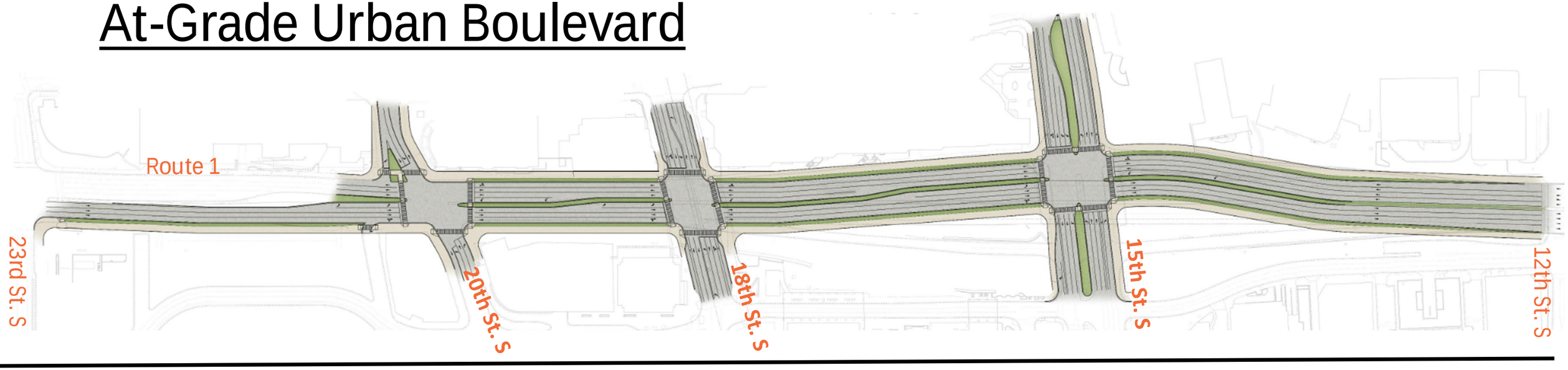


2040 No-Build

Concept Development – Urban Boulevard & Existing Elevated Roadway

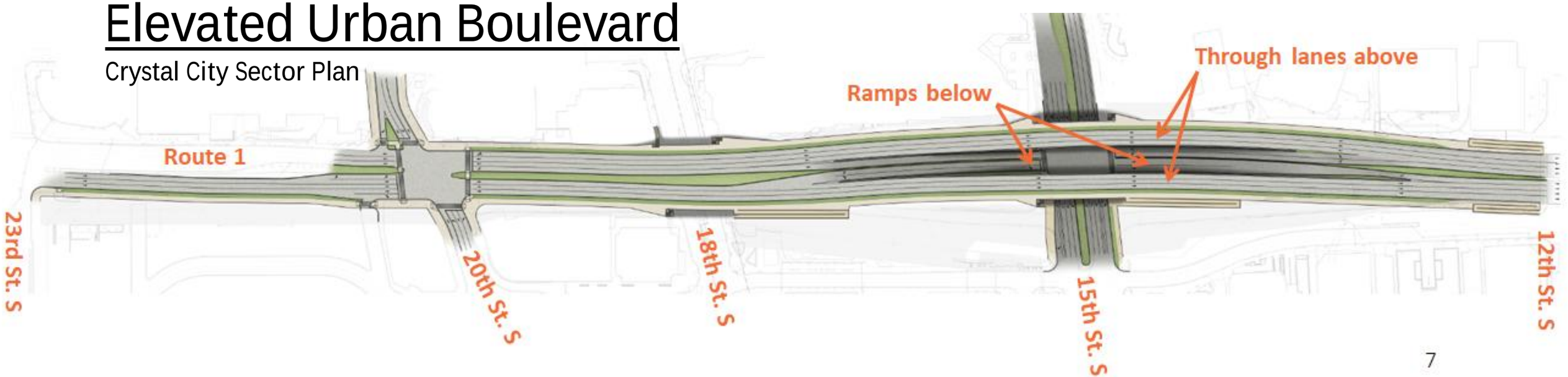
Concept Development

At-Grade Urban Boulevard



Elevated Urban Boulevard

Crystal City Sector Plan



Concept Development

Testing At-Grade Intersection Configurations

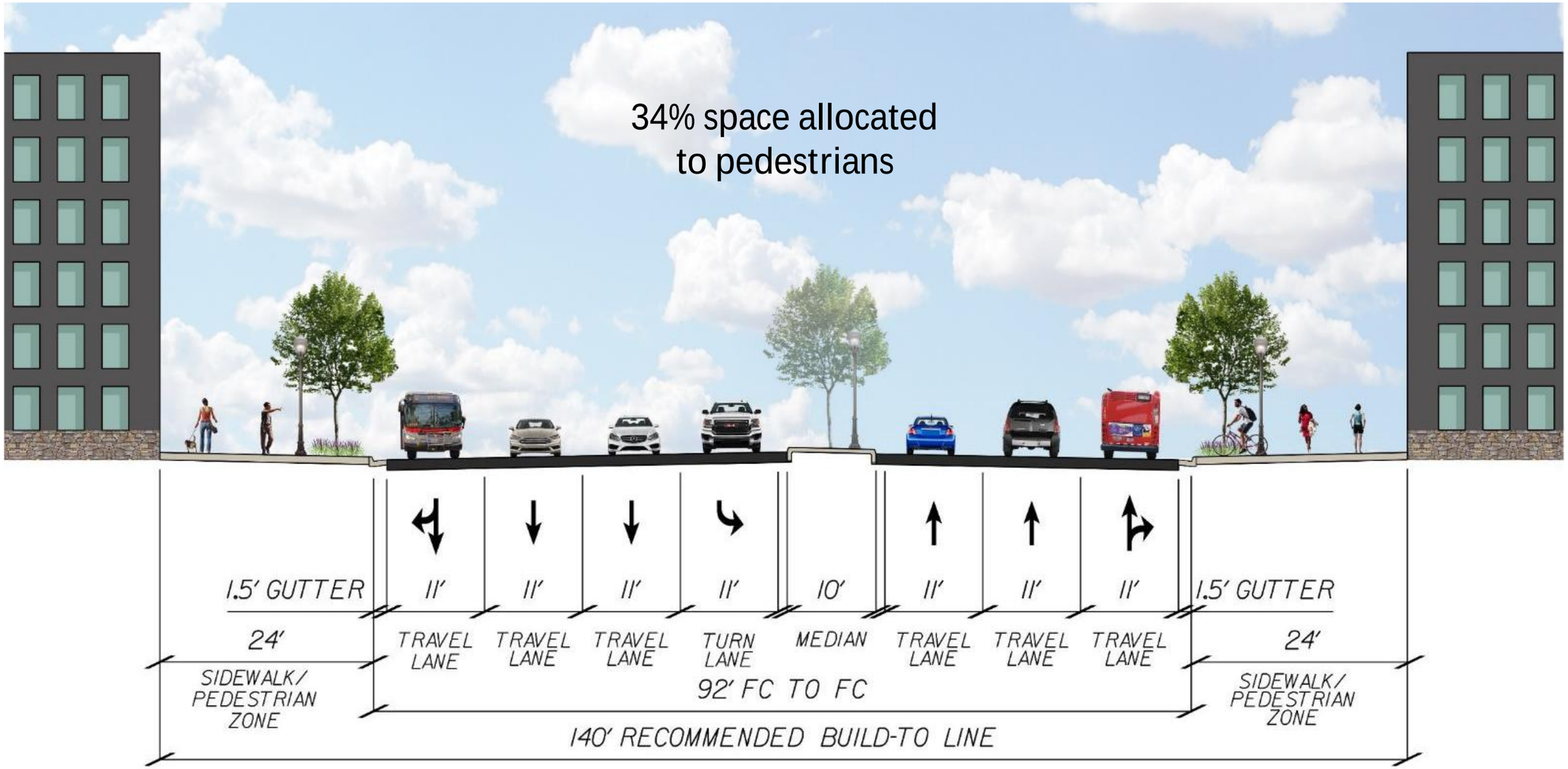
Screening Analysis

Scenario Name	ST	SB	NB	2025 AM		2040 AM		2025 PM		2040 PM	
				15th	18th	15th	18th	15th	18th	15th	18th
At-Grade Concept A: Dual SB Lefts, Single SB Right @ 15th (9 lanes)	15th			F (82 s)	D (48 s)	F (180 s)	F (122 s)	D (47 s)	D (36 s)	F (82 s)	D (49 s)
	18th										
At-Grade Concept B: Single SB Left & Right @ 15th (8 lanes)	15th			F (135 s)	D (48 s)	F (217 s)	F (122 s)	D (48 s)	D (36 s)	F (95 s)	D (48 s)
	18th										
At-Grade Concept C: Single Left & Shared Thru/Right (7 lanes)	15th			F (137 s)	D (50 s)	F (221 s)	F (122 s)	F (83 s)	D (33 s)	F (162 s)	D (47 s)
	18th										
At-Grade Concept D: Dual SB Lefts, Single SB Right @ 15th (9 lanes); no LT @ 18th	15th			F (124 s)	C (23 s)	F (168 s)	C (32 s)	E (56 s)	C (20 s)	F (95 s)	C (21 s)
	18th										
At-Grade Concept E: Concept A w/ 2 Thru Lanes on Rte 1 (7 lanes)	15th			F (119 s)	E (74 s)	F (228 s)	F (154 s)	E (56 s)	E (60 s)	F (100 s)	F (103 s)
	18th										
At-Grade Concept F: Concept A w/ No Left Turns at 15th/18th (7 lanes @15th, 6 lanes @ 18th)	15th			D (47 s)	D (39 s)	F (102 s)	F (81 s)	C (30 s)	D (40 s)	D (44 s)	D (51 s)
	18th										
Sector Plan Concept: Inverted SPUI				*Not Analyzed Yet*	N/A	C (23 s)	N/A	*Not Analyzed Yet*	N/A	D (43 s)	N/A

- Conventional 4-way intersections extremely congested—lots of "red"—with design volumes, unless more turn lanes added ⇨ No! Not conducive for pedestrians or vision for Crystal City
- Selected maximum 7 lanes and conducted detailed traffic analysis on three concepts
  - C – All turning movements permitted at 15th/18th Street intersections ⇨ 7 lanes (Concept 1)
  - F – Left turns from Route 1 prohibited at 15th/18th Street intersections ⇨ 6 lanes (Concept 2)
  - G – "Hybrid" (left turns at Route 1/15th St, no left turns at Route 1/18th St) at request of Arlington County staff (Concept 3)
- Performed sensitivity analysis to determine traffic volumes that *can* be supported with acceptable Level of Service
- Key question: How much diversion of traffic occurs with less capacity or restricted movements on Route 1, and where will this traffic go?

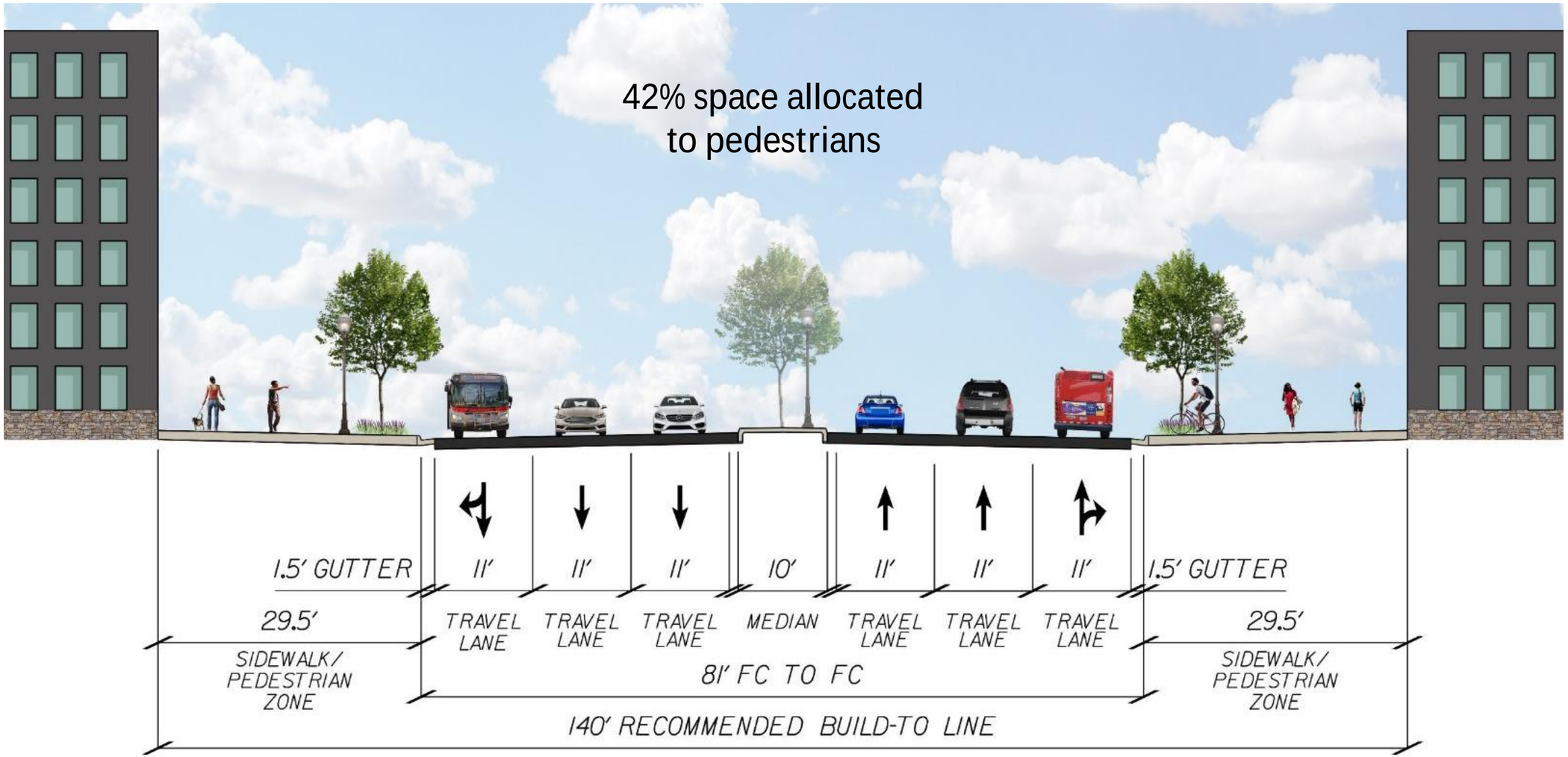
At-Grade Concept 1

All turns permitted – 7 lane pedestrian crossing



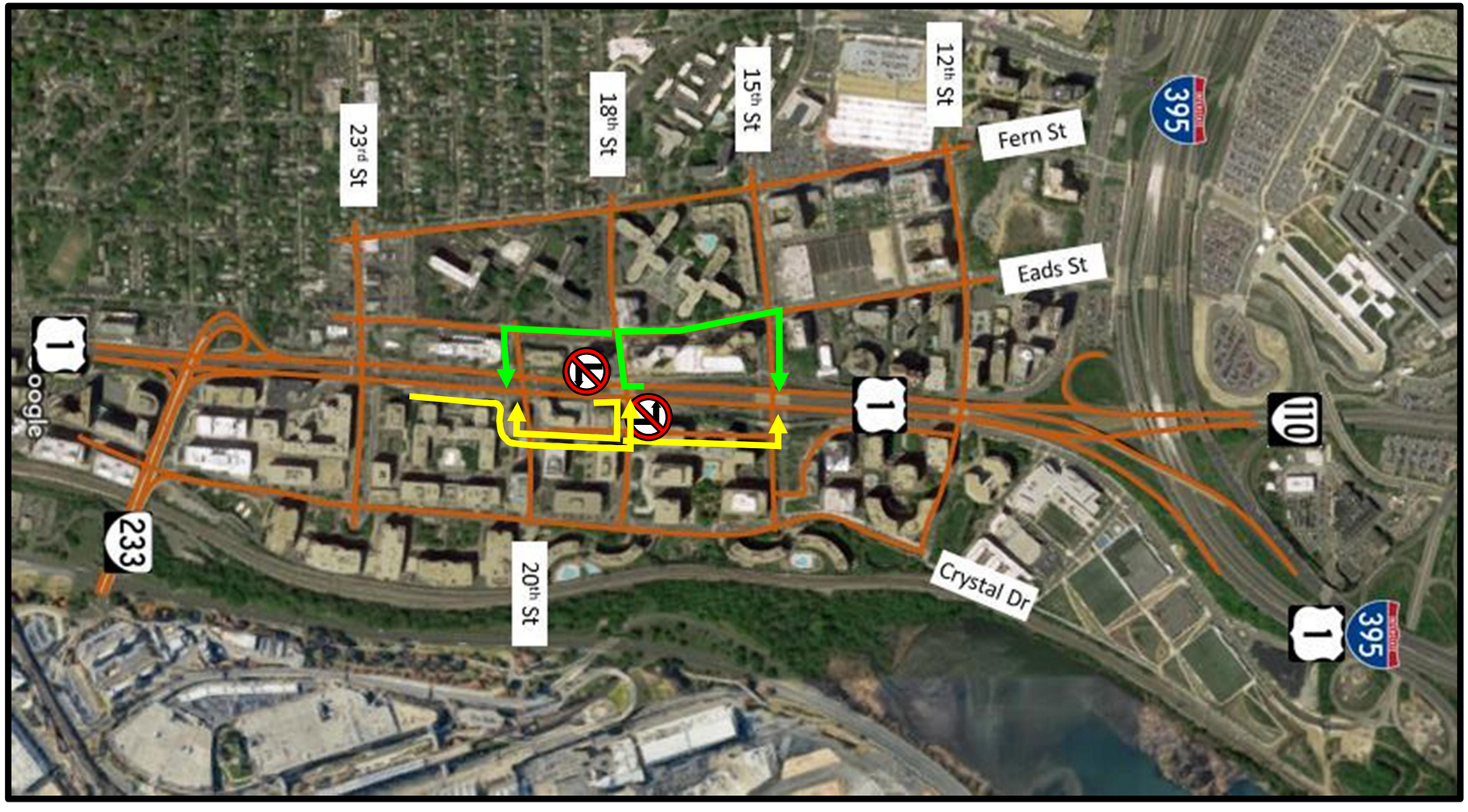
At-Grade Concept 2

No left turns from Route 1 – 6 lane pedestrian crossing



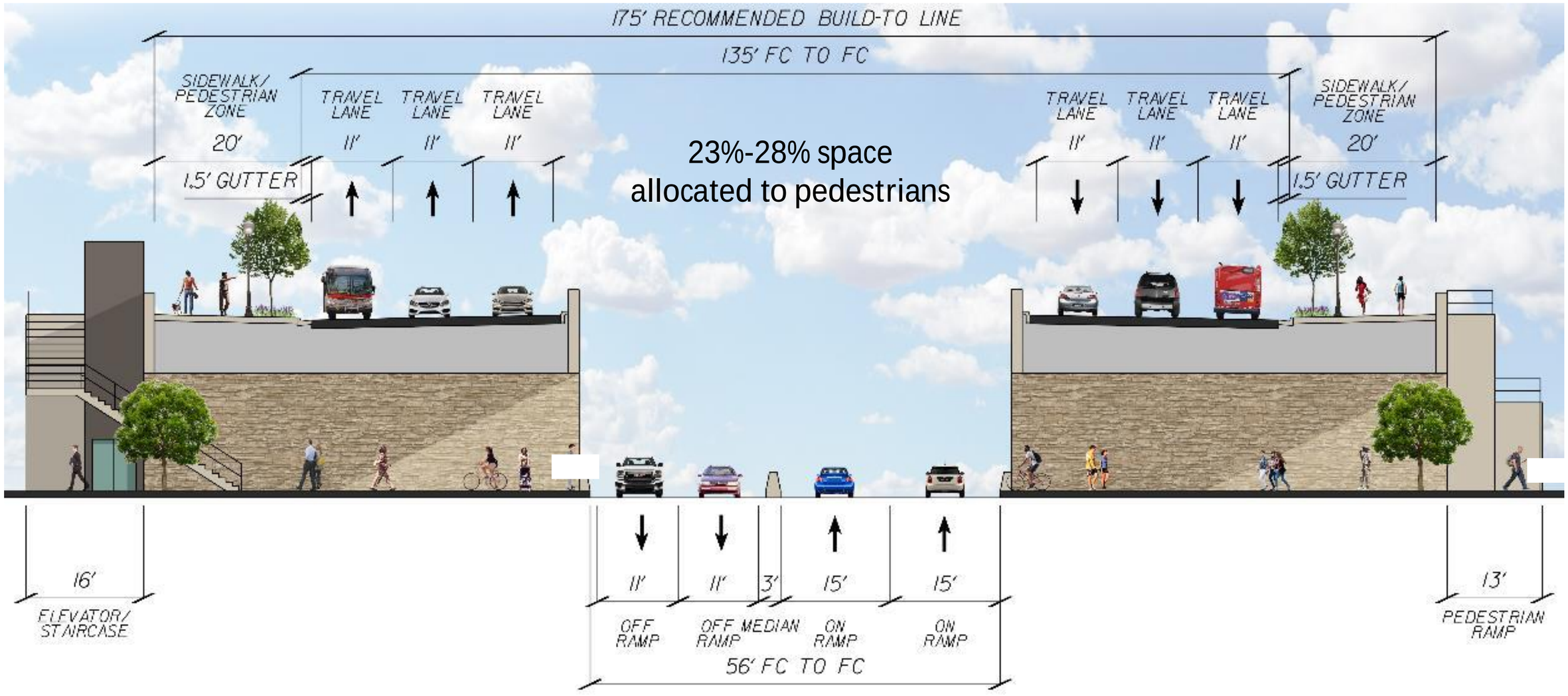
At-Grade Concept 2

No left turns from Route 1 – 18th Street



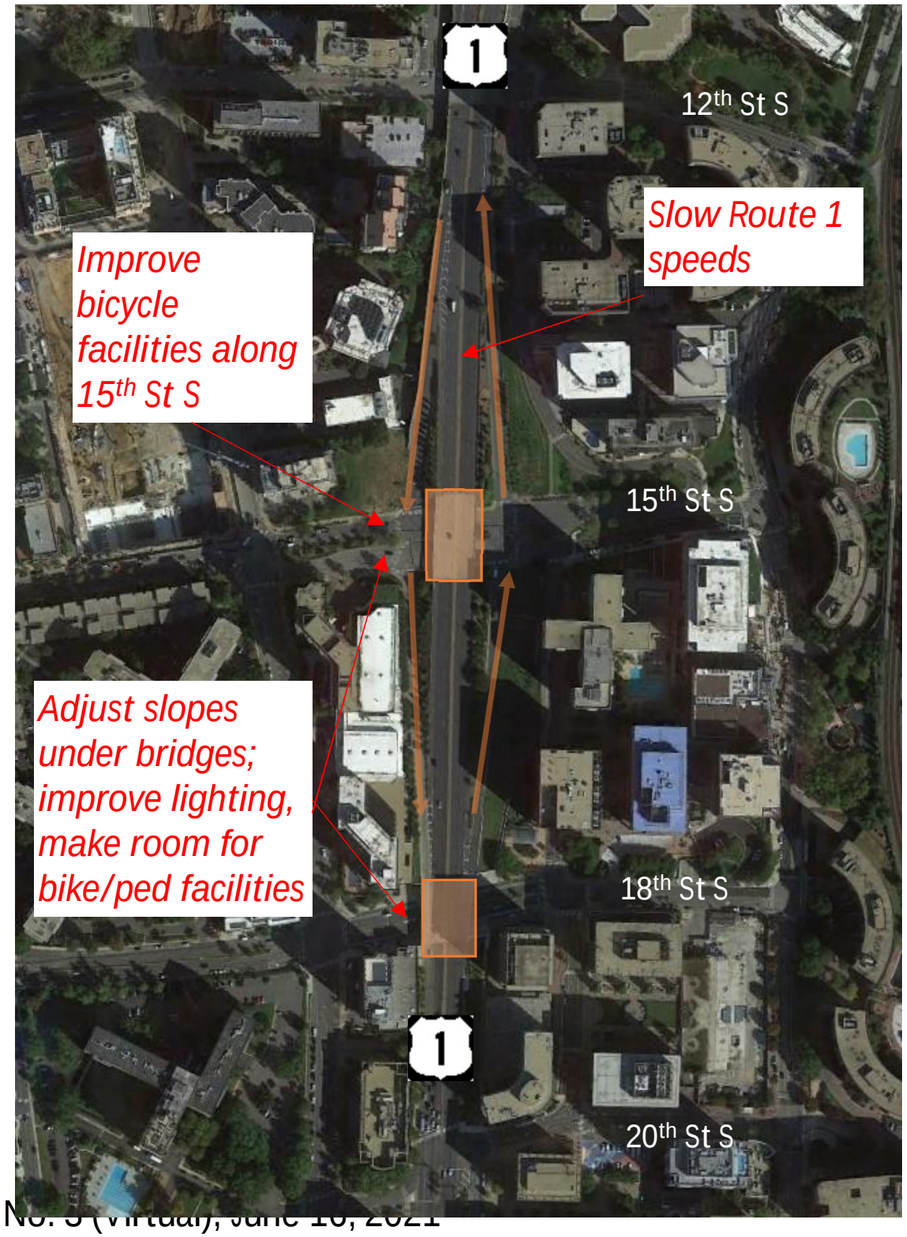
Elevated Concept

Sector Plan Configuration



Existing Configuration with Improvements

- Improvements
  - Slow Route 1 traffic with signage, pavement markings/rumble strips, and speed feedback signs
  - Adjust slopes under bridges at 15th Street to expand bike and ped travel-ways
  - WB bicycle lane on 15th Street
  - Upgraded lighting under bridges
  - Relocated lighting from out of sidewalks
  - Mill and overlay pavements
  - Improved pavement markings
- Note: Wider sidewalks/landscaping tied to redevelopment



Pedestrian Forecasts & Capacity of At-Grade Intersections

Pedestrian Crossing Capacity – At Grade

Future ped forecasts account for Amazon and adjacent developments

2040 AM Peak Hour:

EB/WB	Existing Ped Volume	Forecasted Ped Volume	*Estimated Ped Capacity of EB/WB Crossing of Route 1*		
			Existing/No-Build	Build (Concept 1)	Build (Concept 2)
15th	30	270	5,200	1,440	1,680
18th	360	720	8,000	1,680	1,680

2040 PM Peak Hour:

EB/WB	Existing Ped Volume	Forecasted Ped Volume	*Estimated Ped Capacity of EB/WB Crossing of Route 1*		
			Existing/No-Build	Build (Concept 1)	Build (Concept 2)
15th	60	300	5,200	1,200	1,520
18th	630	1,270	8,000	1,440	1,760

At-grade build concepts have sufficient capacity for 2040 demand

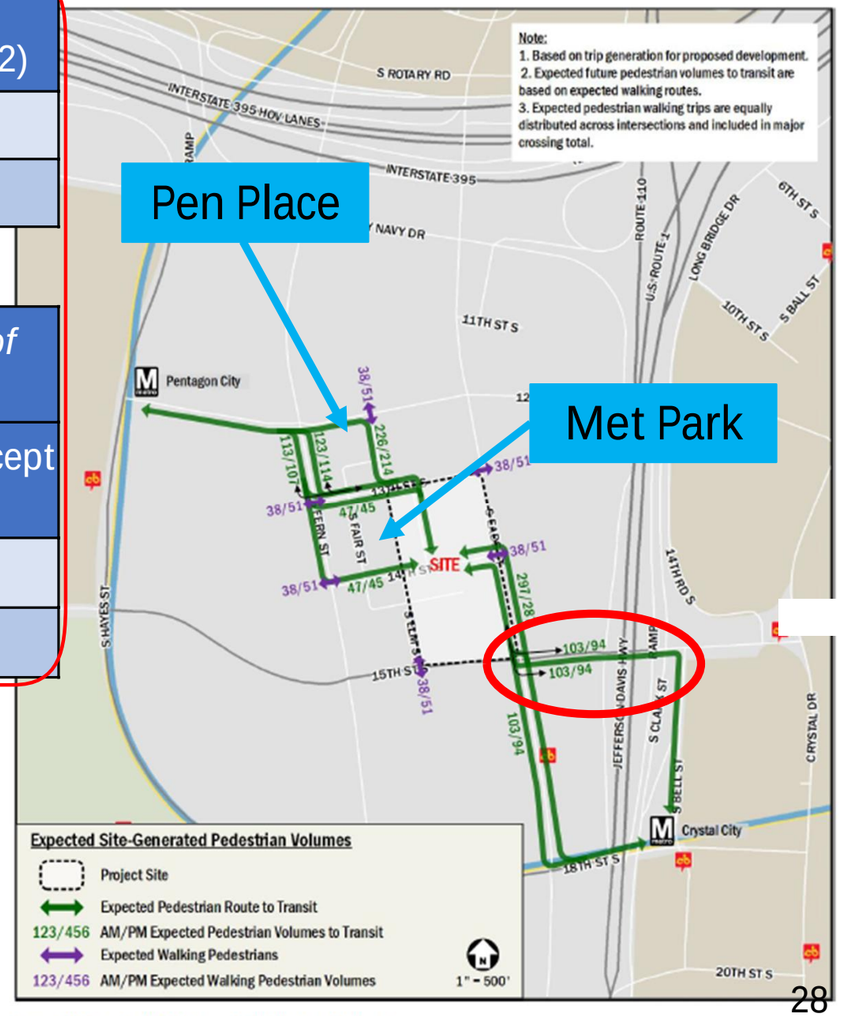
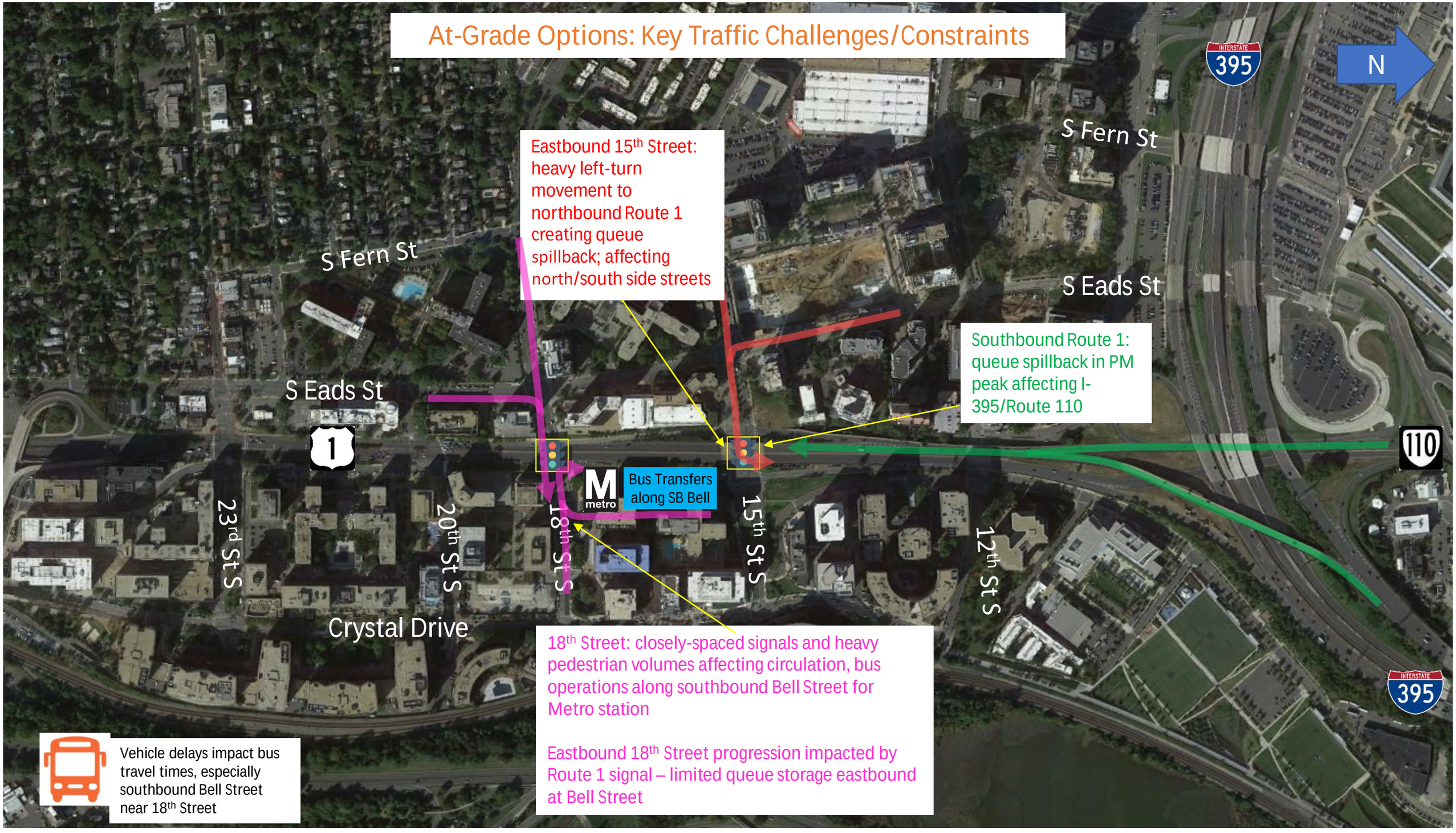


Figure 72: Expected Site Generated Pedestrian Volumes

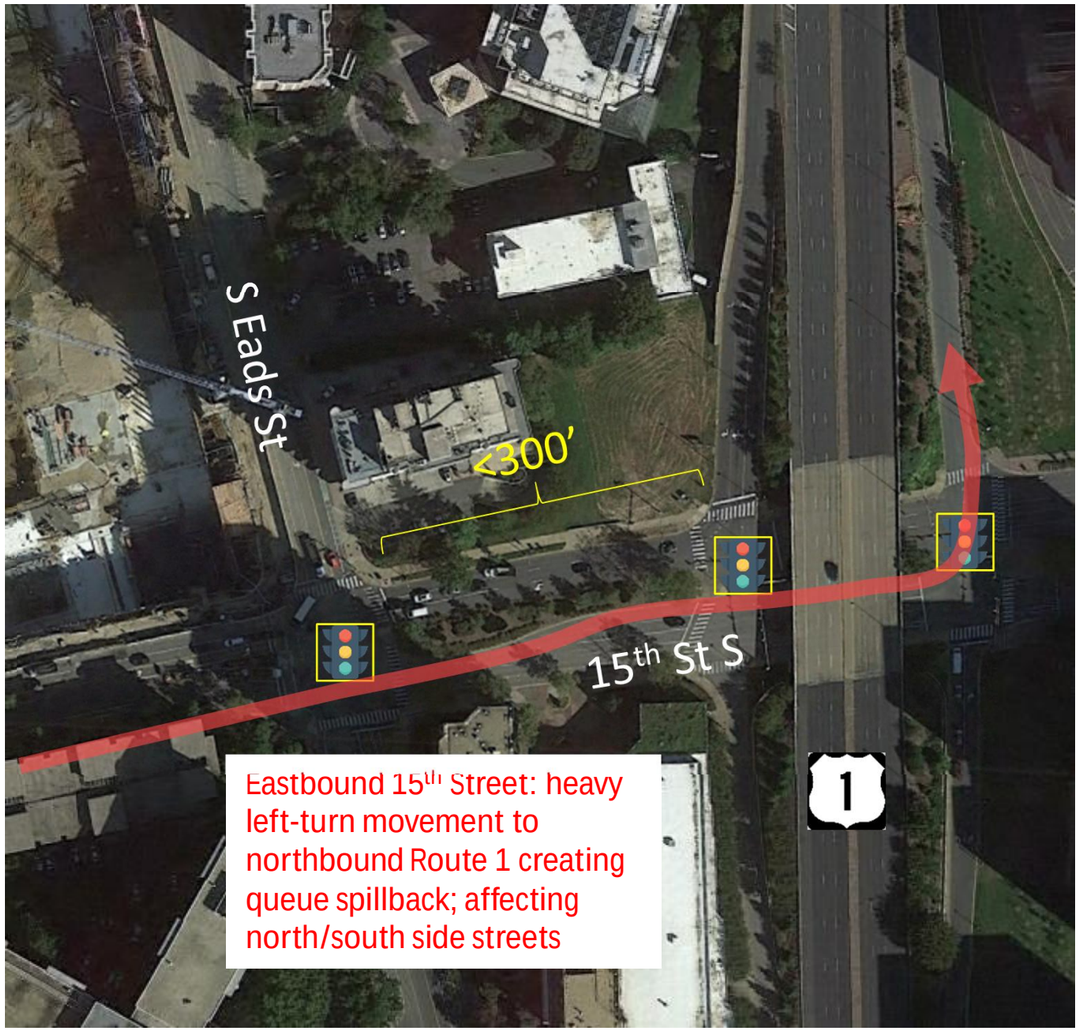
Traffic Analysis for At-Grade Concepts

At-Grade Options: Key Traffic Challenges/Constraints



At-Grade Options: Key Traffic Challenges/Constraints

Route 1 at 15th St S

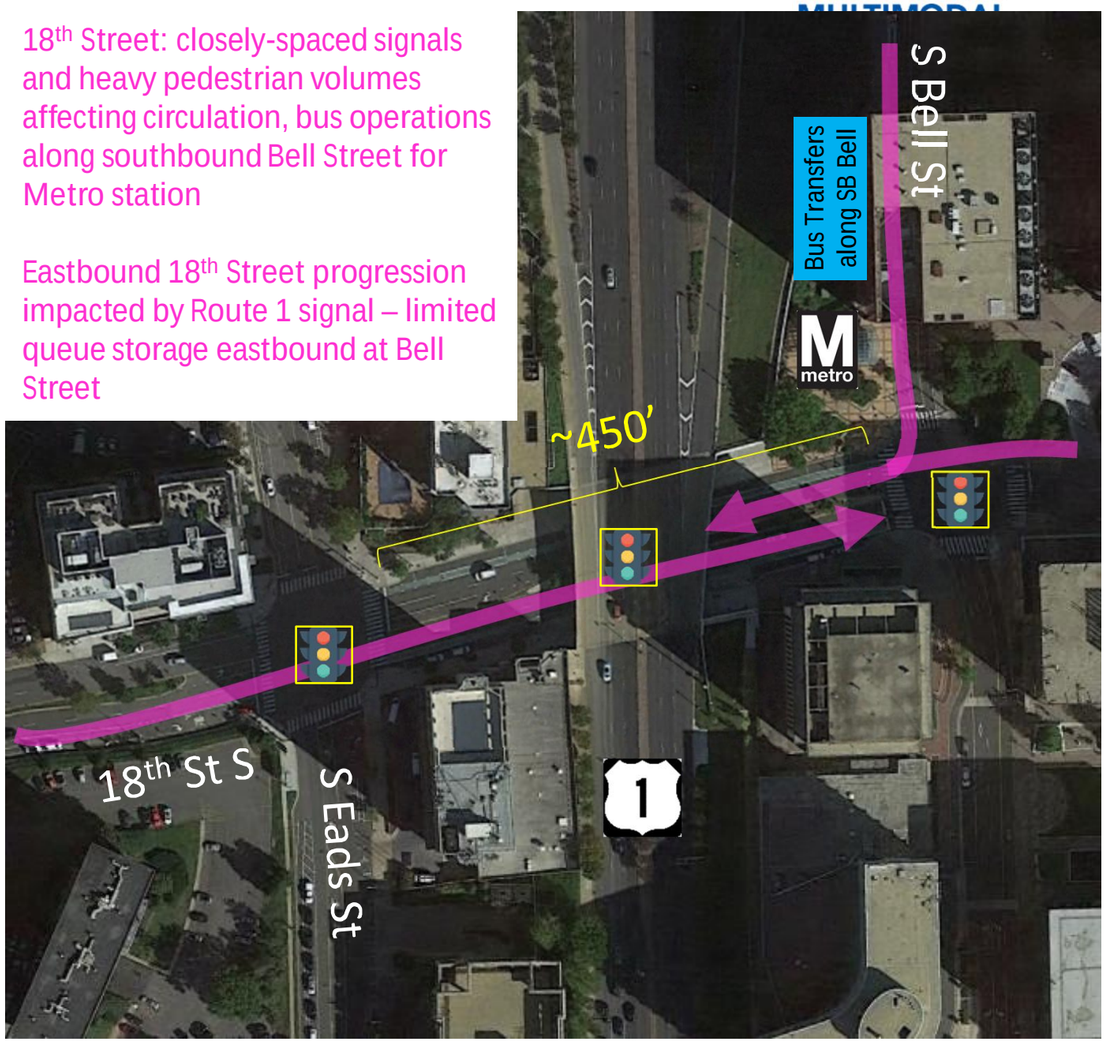


Eastbound 15th Street: heavy left-turn movement to northbound Route 1 creating queue spillback; affecting north/south side streets

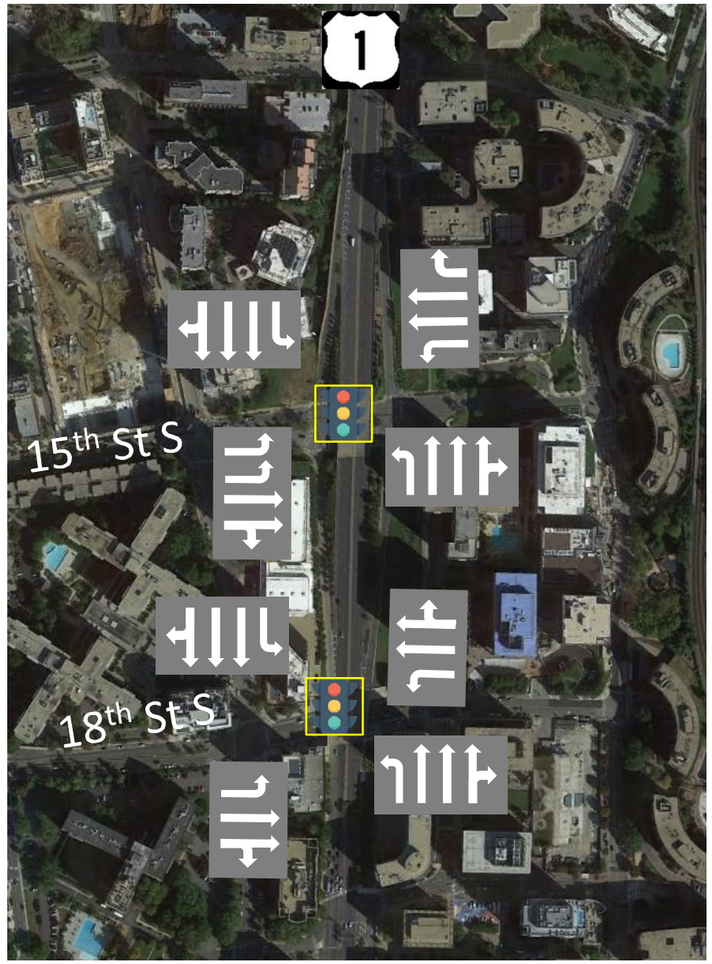
Route 1 at 18th St S

18th Street: closely-spaced signals and heavy pedestrian volumes affecting circulation, bus operations along southbound Bell Street for Metro station

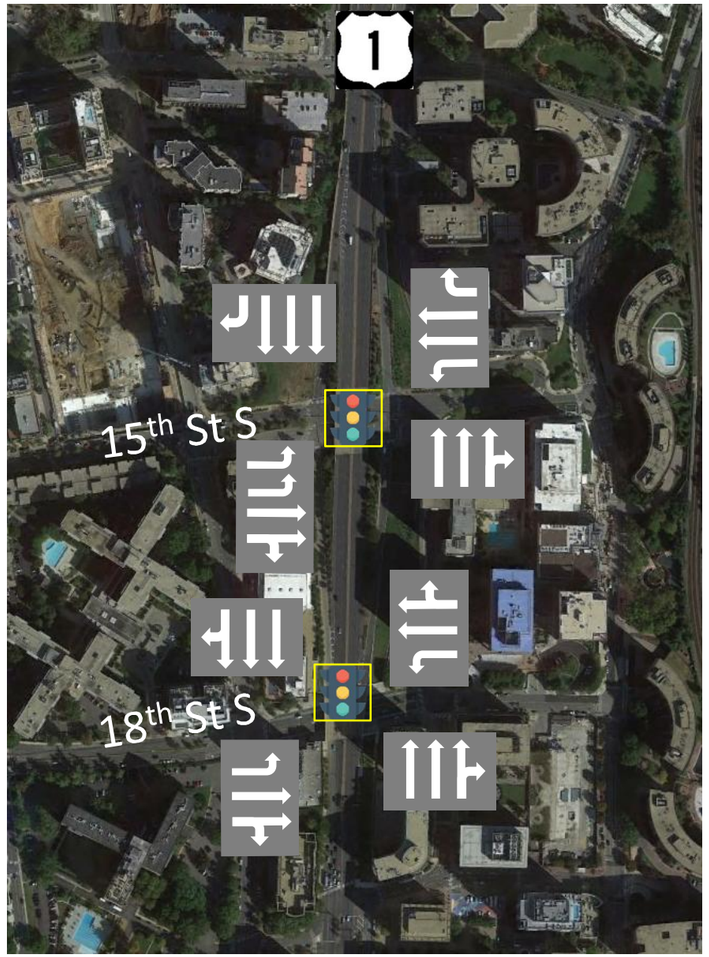
Eastbound 18th Street progression impacted by Route 1 signal – limited queue storage eastbound at Bell Street



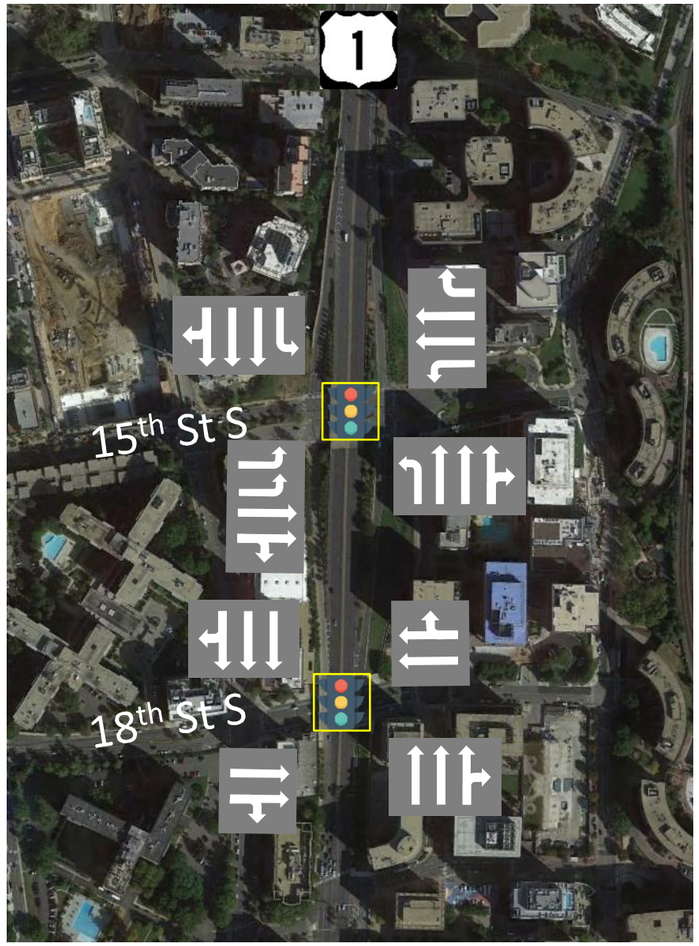
Summary of At-Grade Options



Option 1
Left-Turns at both 15th and 18th



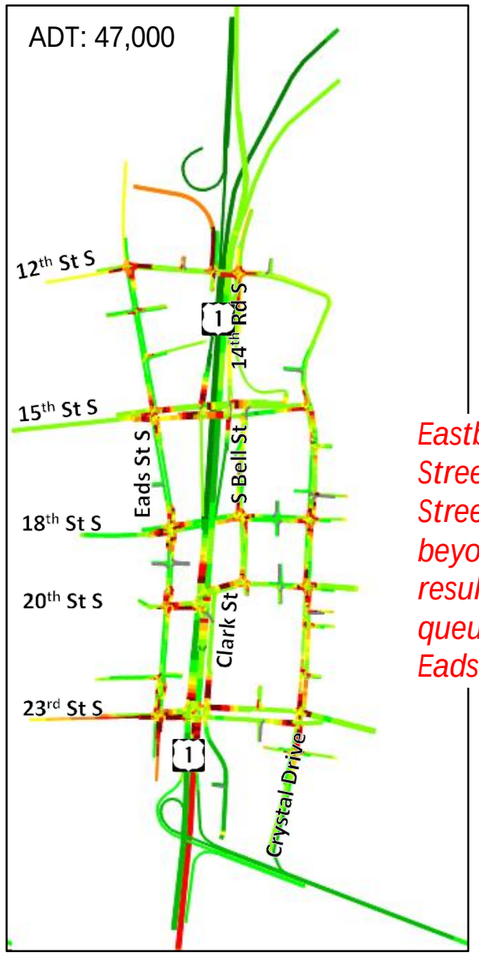
Option 2
No Left-Turns from Route 1 at 15th or 18th



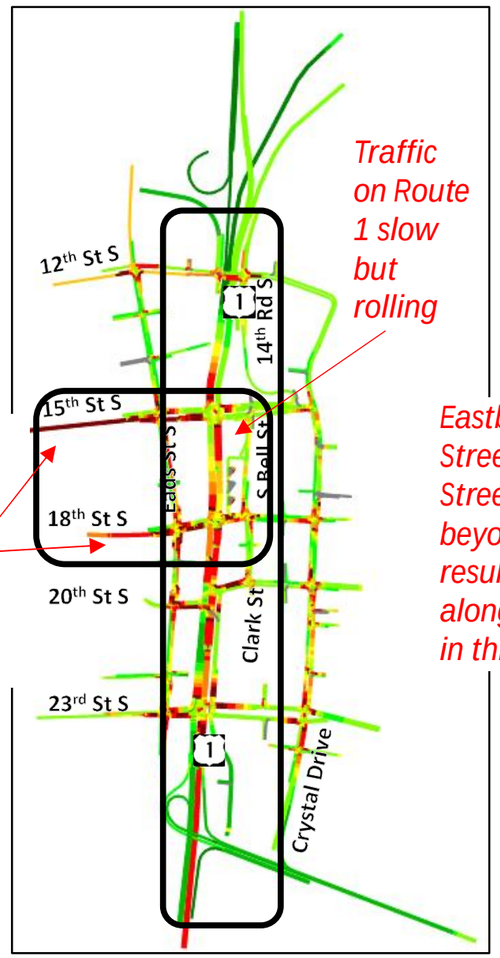
Option 3
Left-Turns at 15th, No Left-Turns at 18th

MULTIMODAL IMPROVEMENTS

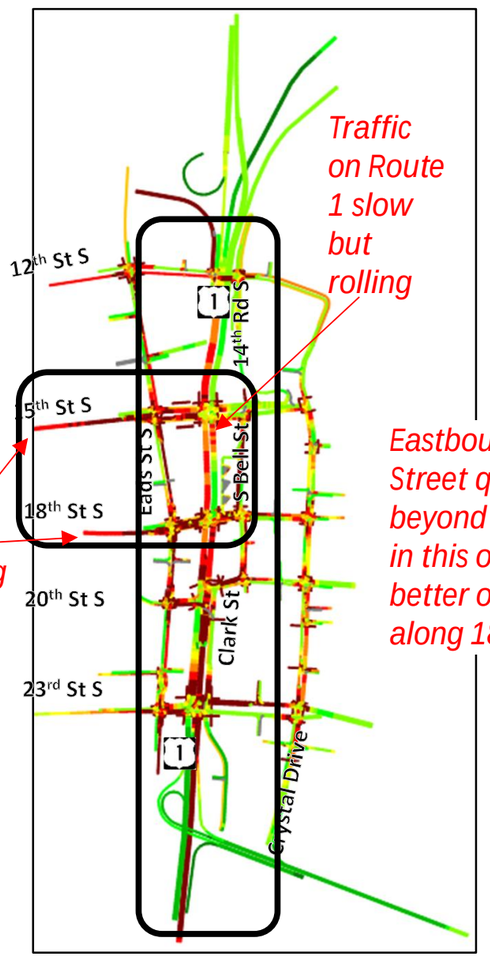
AM Peak Hour Speed Comparison with Existing (2019) Volumes



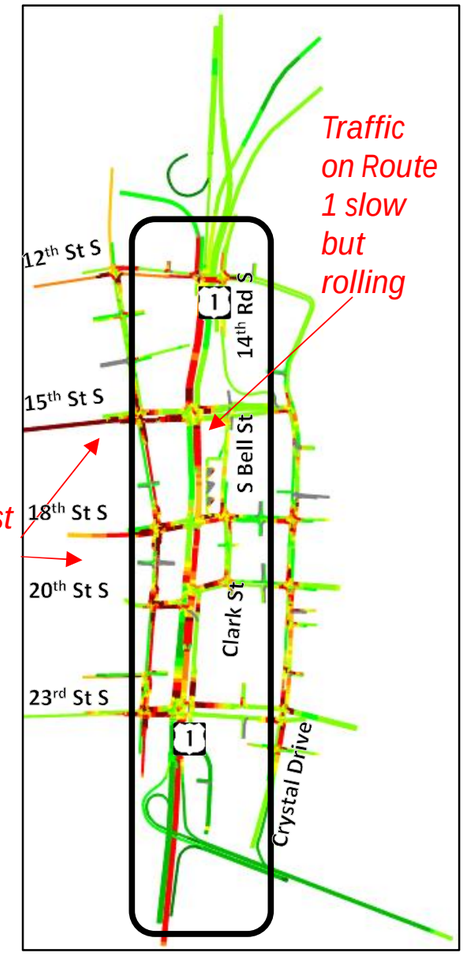
Configuration: Existing (Elevated)
Volumes: Existing (2019)



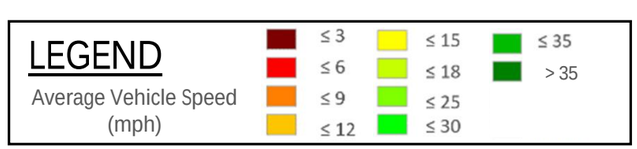
Configuration: At-Grade Option 1
Volumes: Existing (2019)



Configuration: At-Grade Option 2
Volumes: Existing (2019)



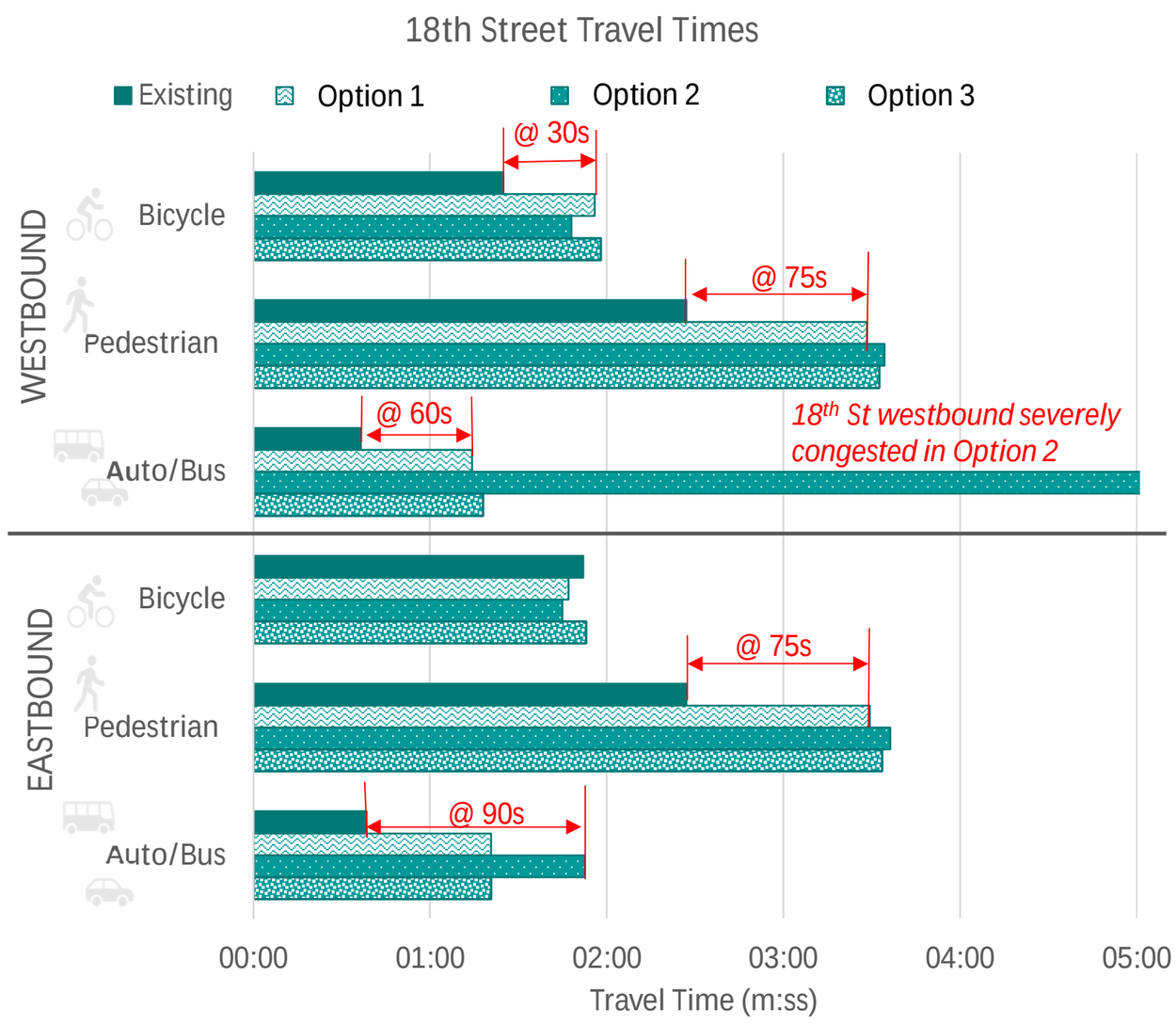
Configuration: At-Grade Option 3
Volumes: Existing (2019)



Travel Times on 15th and 18th Streets (Eads to Bell) by Mode

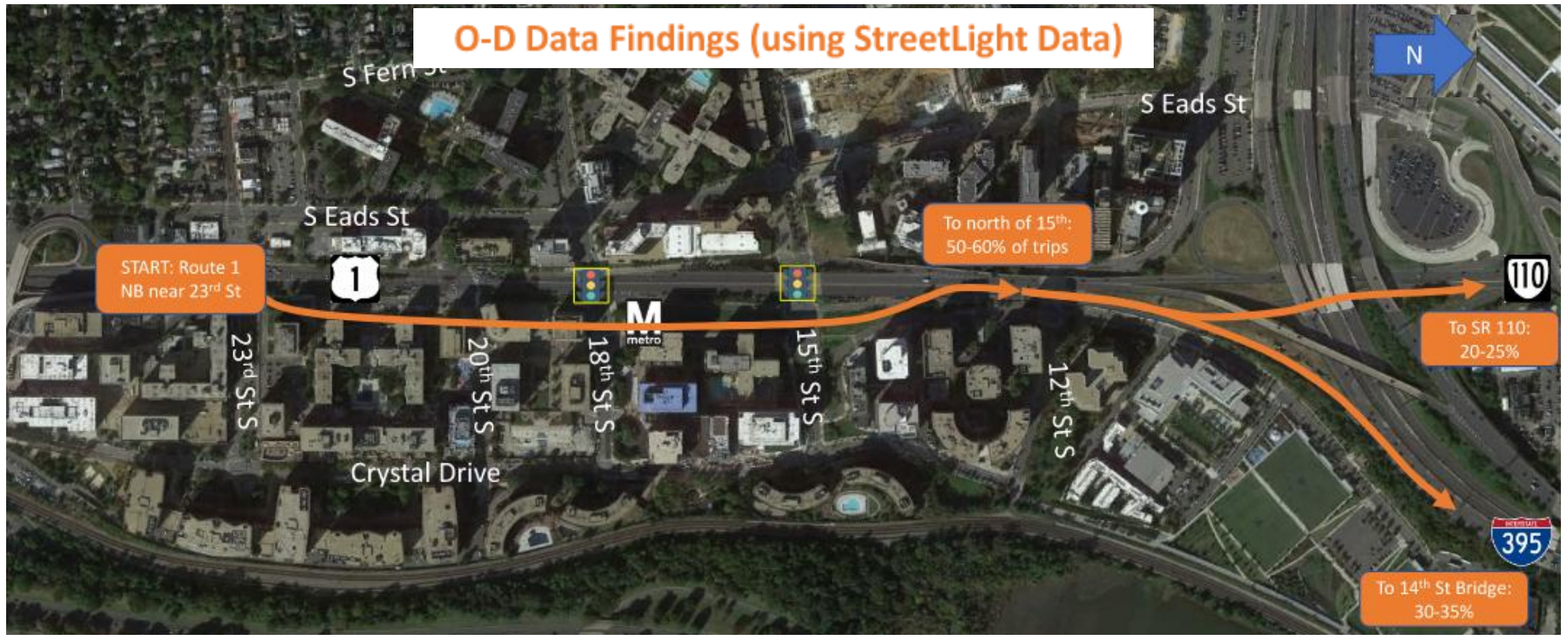
Applying Existing (2019) AM Peak Hour Volumes

MULTIMODAL IMPROVEMENTS



Travel Demand Management (TDM)

Origin and Destination Data



- 40% of trips along Route 1 have a start or end point somewhere off Route 1 near the study area.
- These turning movements onto and off of Route 1 need to be accounted for without causing spillback onto the side streets and nearby neighborhoods

Origin Location	Destination				
	District of Columbia	Pentagon City/Crystal City Neighborhoods	Rosslyn/Ballston Corridor	Arlington County – Other	Outside of Arlington or DC
Pentagon City Neighborhood	36%	14%	8%	22%	20%
15th St EB between Eads and Route 1	39%	22%	7%	13%	19%
Route 1 NB on-ramp from 15th	73%	2%	11%	2%	11%

Average weekday AM peak hour in 2019

Potential TDM Targets

Potential Targets for Shift to Transit

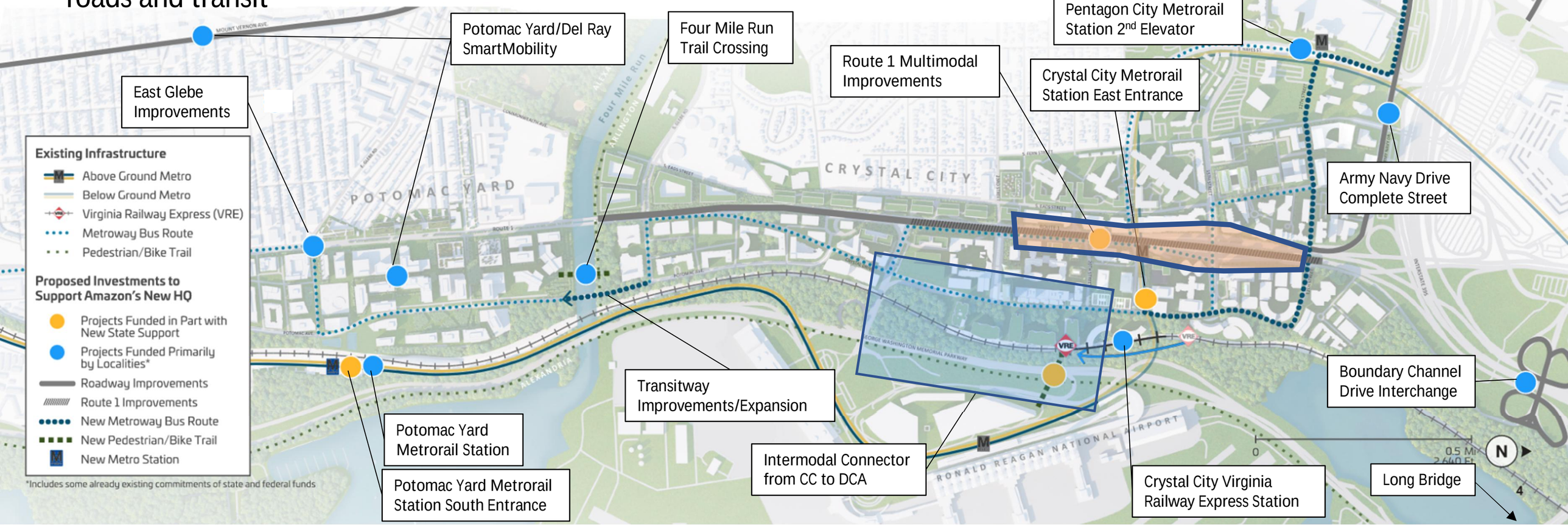
- Through trips (60%) given the significant transit investments in Crystal City/Pentagon City
- Large number vehicle trips originating in Pentagon City (36%) that are destined for Washington, DC
- Vehicular trips starting in Pentagon City that are destined for the Rosslyn/Ballston Corridor (8%)

Potential Targets for Shift to Bike/Walk

- Vehicular trips starting in Pentagon City and using 15th Street and still ending in the Pentagon City/Crystal City area (14%)

Significant National Landing Transit and Mobility Improvements

- Significant state investment is in the Six Year Improvement Plan for enhanced rail and transit in the Crystal City area
- Complements local, regional and state investments for roads and transit
- Ongoing development is less focused on accommodations for vehicles such as parking
- Potential to offset reduced vehicle capacity with use of other transportation modes
- Potential for sustained teleworking post pandemic
- Potential that vehicle demand in the future will be less than what's being forecasted



Estimated Capacity – Parallel Transit Options

Mode		Serves	Estimated Capacity (Persons Moved per Hour *in Peak Direction*)
	Metrorail	Fairfax, South Arlington/Alexandria ⇔ North Arlington/Washington, DC	15,000 to 20,000
	VRE	Fairfax/Prince William/Stafford/ Spotsylvania (or beyond) ⇔ Washington, DC	5,000 to 7,000
	Amtrak	Richmond ⇔ Washington, DC	700 to 1,000
	BRT (Metroway)	Old Town/Potomac Yard ⇔ Crystal City/Pentagon City	500 to 1,000

Nationwide Elevated Freeways to At-Grade Projects

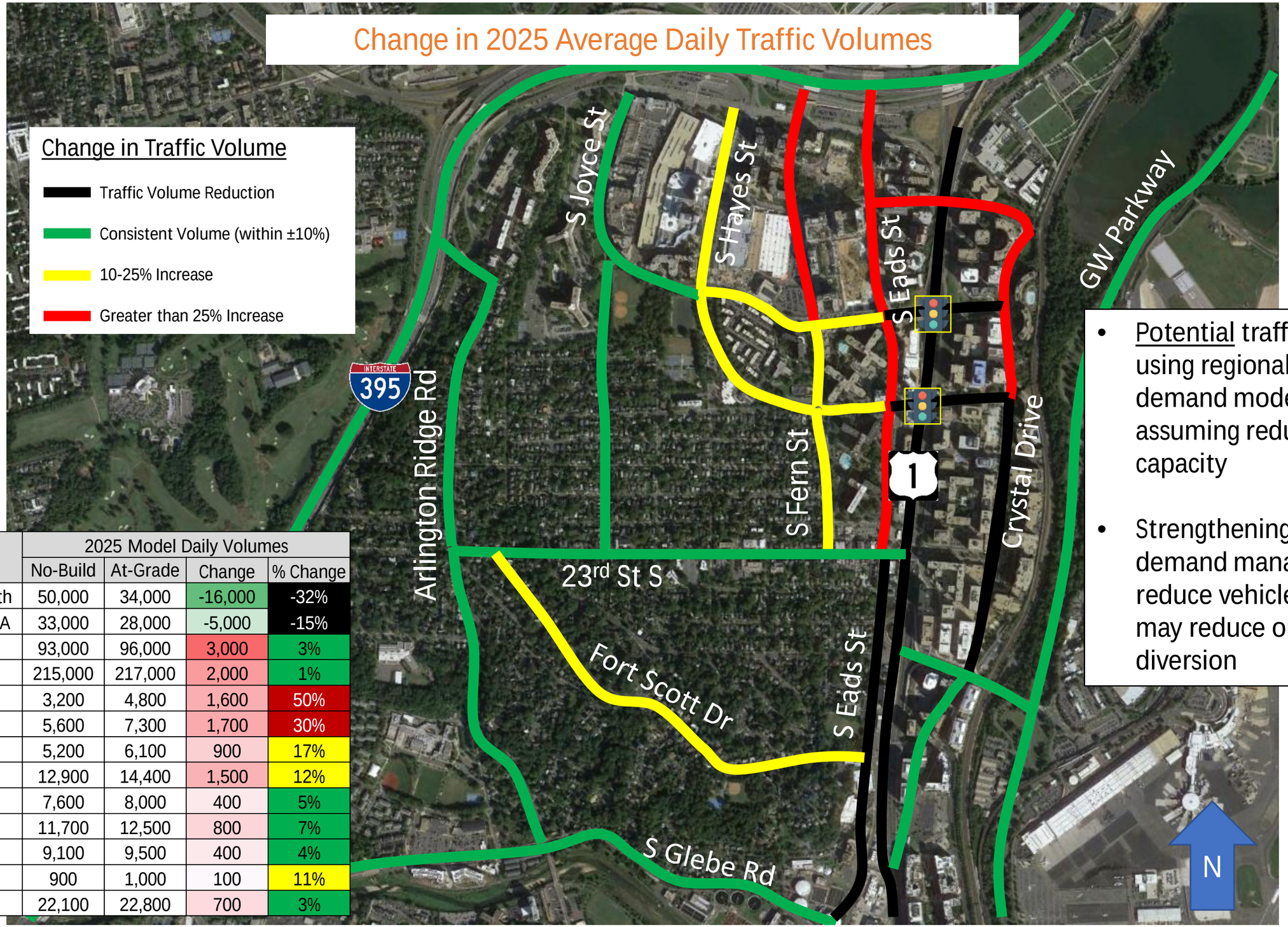
Comparison to Route 1

Project Description	Traffic Volume Change		Project Take-Aways *for Route 1 Study*
	Before Freeway Removal	*After* Freeway Removal	
Embarcadero Freeway (San Francisco, CA) *Freeway Removal (2002) to At-Grade Urban Boulevard due to earthquake damage*	AADT: 100,000+ in 1980s	AADT: 15,000 - 20,000 in 2010s	• Initial traffic congestion was absorbed to the adjacent street network (robust grid of streets) • Transit ridership increased 15%
Central Freeway (San Francisco, CA) *Freeway Removal (2002) to At-Grade Urban Boulevard due to earthquake damage*	AADT: 93,000 in early 2000s	AADT: 45,000 in late 2000s	• Boulevard distributes traffic evenly throughout the immediate neighborhood (robust grid of streets) • Several sample points on adjacent neighborhood experienced decreases in traffic, while none experienced increases greater than 10%
Park East Freeway (Milwaukee, WI) *Freeway Removal (2002) to At-Grade Urban Boulevard due to under-utilization / desire to spur redevelopment*	AADT: 35,000 in 2000s	AADT: 23,000 - 26,000 in 2021	• Traffic congestion downtown remained "relatively modest“ (robust grid of streets) • Community development post-completion did not cause more congestion on the reduced-capacity boulevard
Alaskan Way (Seattle, WA) *Freeway Removal (2019) to At-Grade Urban Boulevard and Tunnel due to obsolete existing structure*	Peak Hour Volume*: 6,000 (viaduct + surface street)	*Forecasted* Peak Hour Volume*: 5,500 (tunnel + surface street)	• 8-lane above-grade viaduct being replaced with 4-lane tolled tunnel; reconstructed surface boulevard to be completed this year

*Recent project; before-and-after AADT data not available

Sensitivity Analyses

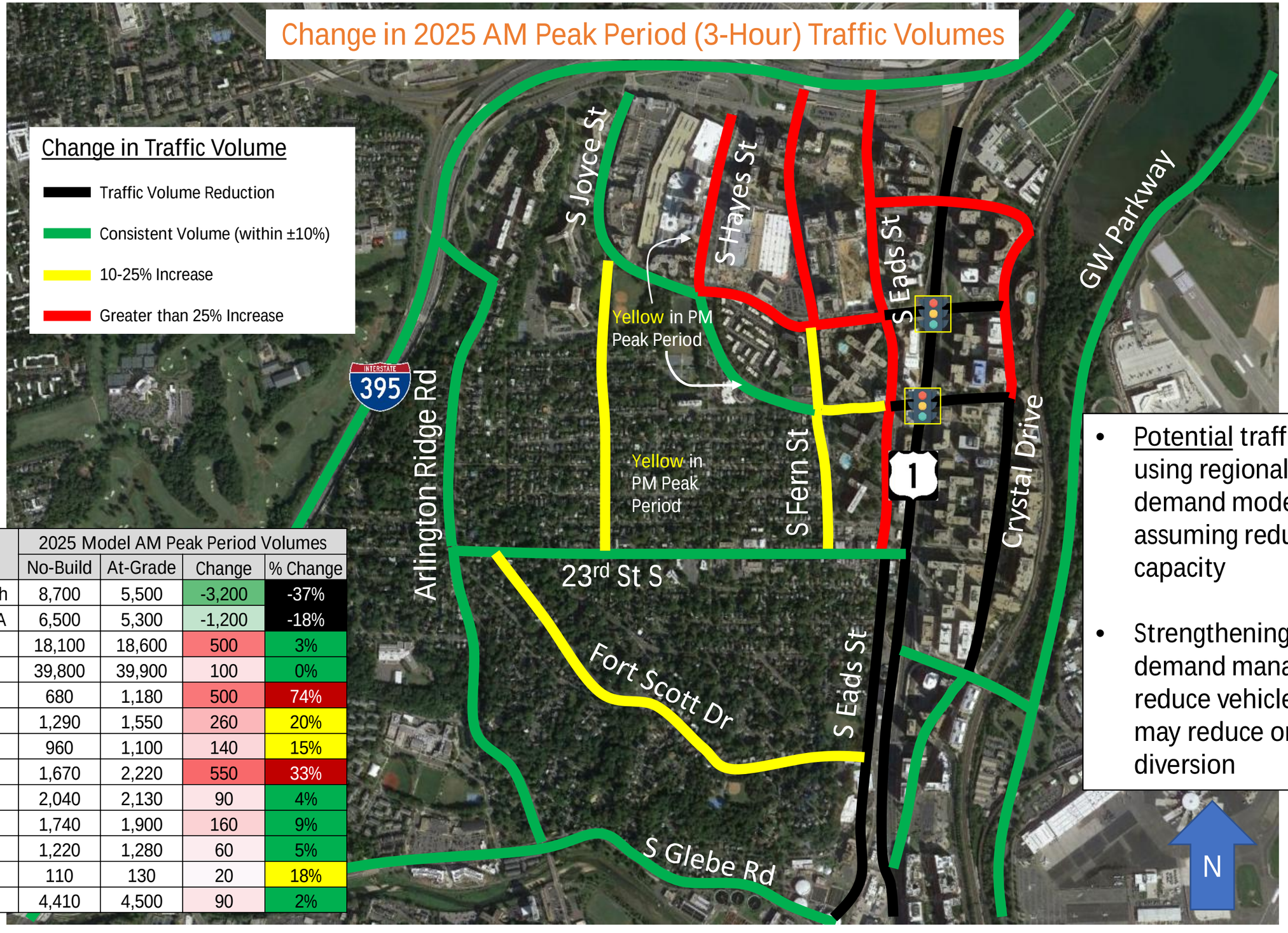
Change in 2025 Average Daily Traffic Volumes



Facility		2025 Model Daily Volumes			
		No-Build	At-Grade	Change	% Change
Route 1	North of 15th	50,000	34,000	-16,000	-32%
	North of DCA	33,000	28,000	-5,000	-15%
GW Parkway		93,000	96,000	3,000	3%
I-395		215,000	217,000	2,000	1%
Crystal Drive		3,200	4,800	1,600	50%
S Eads St		5,600	7,300	1,700	30%
S Fern St		5,200	6,100	900	17%
S Hayes St		12,900	14,400	1,500	12%
S Joyce St		7,600	8,000	400	5%
Arlington Ridge Rd		11,700	12,500	800	7%
23rd St S		9,100	9,500	400	4%
Fort Scott Dr		900	1,000	100	11%
S Glebe Rd		22,100	22,800	700	3%

- Potential traffic diversion using regional travel demand model and assuming reduced Route 1 capacity
- Strengthening travel demand management will reduce vehicle trips and may reduce or eliminate diversion

Change in 2025 AM Peak Period (3-Hour) Traffic Volumes



Facility		2025 Model AM Peak Period Volumes			
		No-Build	At-Grade	Change	% Change
Route 1	North of 15th	8,700	5,500	-3,200	-37%
	North of DCA	6,500	5,300	-1,200	-18%
GW Parkway		18,100	18,600	500	3%
I-395		39,800	39,900	100	0%
Crystal Drive		680	1,180	500	74%
S Eads St		1,290	1,550	260	20%
S Fern St		960	1,100	140	15%
S Hayes St		1,670	2,220	550	33%
S Joyce St		2,040	2,130	90	4%
Arlington Ridge Rd		1,740	1,900	160	9%
23rd St S		1,220	1,280	60	5%
Fort Scott Dr		110	130	20	18%
S Glebe Rd		4,410	4,500	90	2%

- <u>Potential</u> traffic diversion using regional travel demand model and assuming reduced Route 1 capacity
- Strengthening travel demand management will reduce vehicle trips and may reduce or eliminate diversion

Traffic Model Simulation Sensitivity Analyses

Traditional Forecasting Approach (Higher Vehicle Trips)

+

Year 2040 Traffic (From Arlington)

Year 2025 Traffic (From Arlington)

Existing Traffic (2019) without Amazon [Pre-COVID]

Travel Demand Management (Managing Vehicle Trips by Focusing on Other Travel Modes)

-

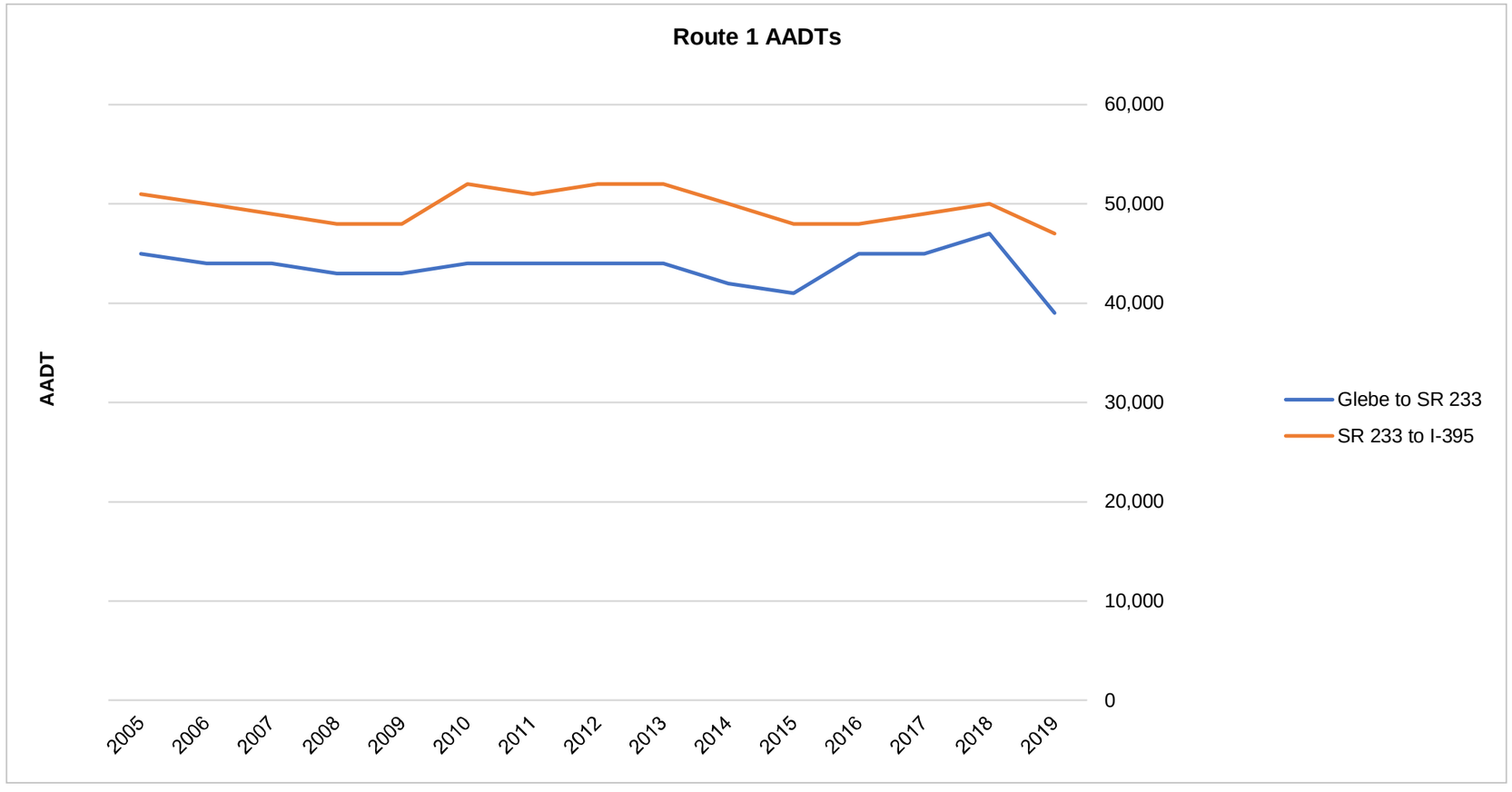
Existing Traffic with 10% reduction

Existing Traffic with 20% reduction

Existing Traffic with 30% reduction of through Route 1 trips

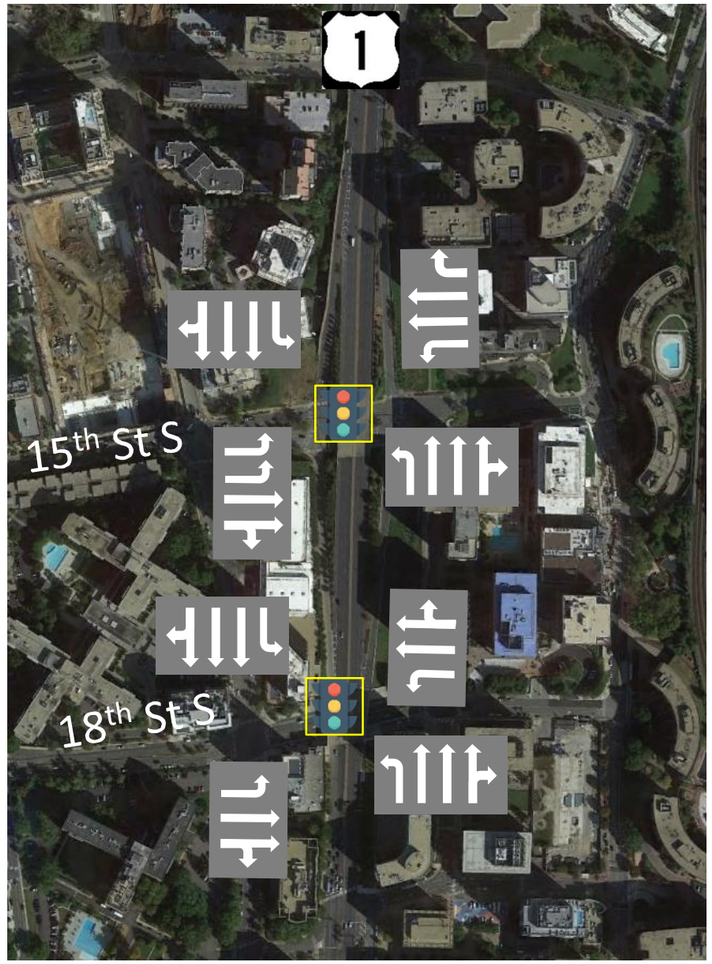
Traffic Model Simulation Sensitivity Analyses

Historic Route 1 Counts

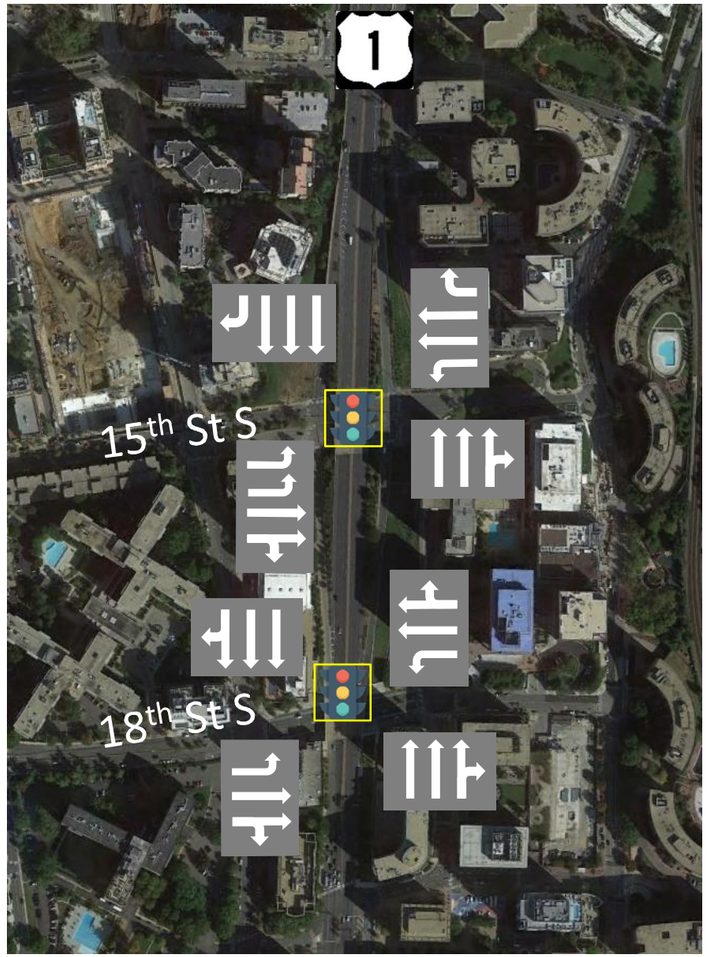


Traffic volumes along Route 1 have remained generally consistent (~50,000 vehicles per day) over the past 15+ years (prior to COVID-19)

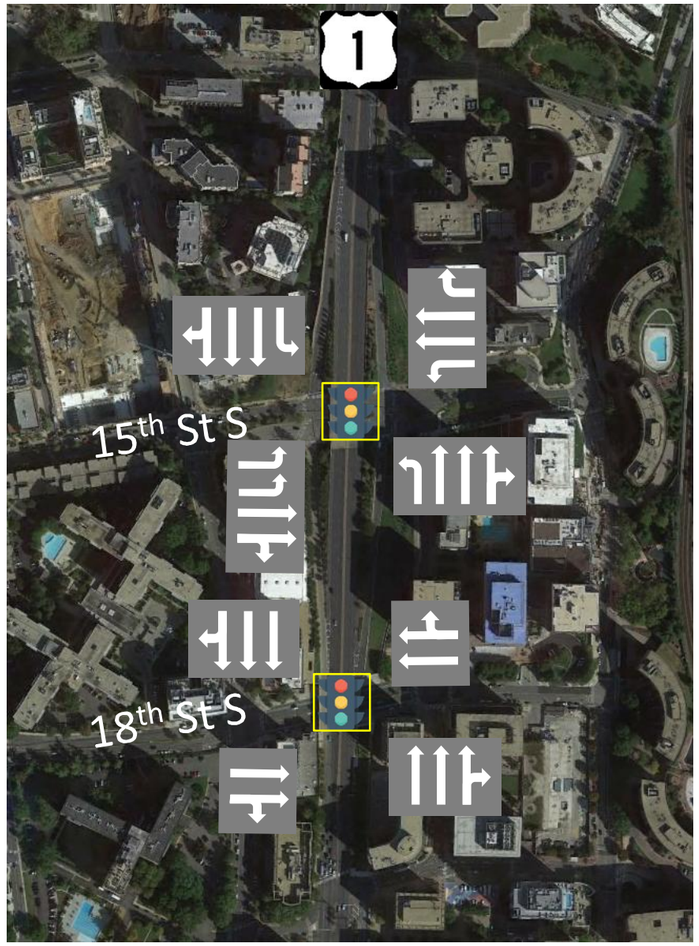
Summary of At-Grade Options



Option 1
Left-Turns at both 15th and 18th

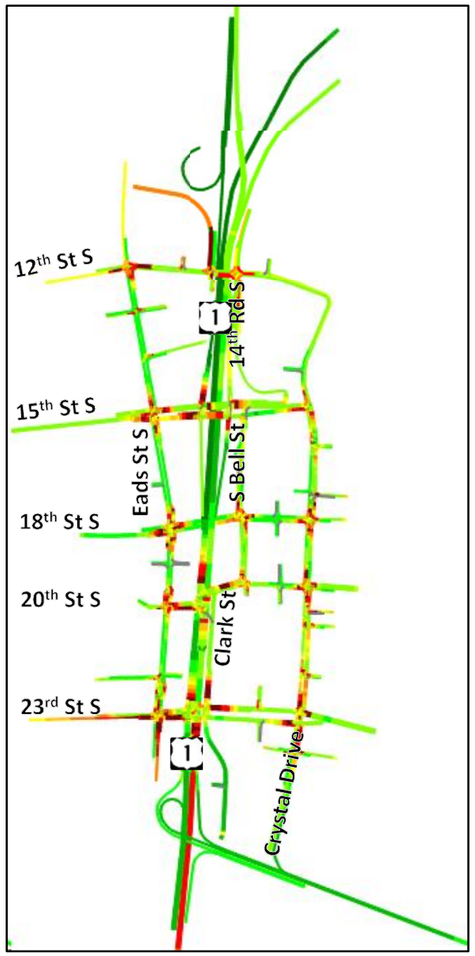


Option 2
No Left-Turns from Route 1 at 15th or 18th

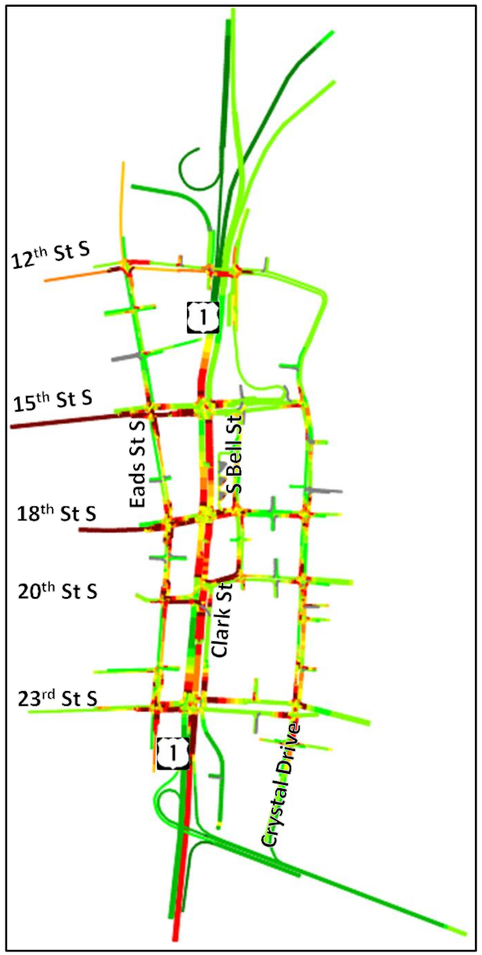


Option 3
Left-Turns at 15th, No Left-Turns at 18th

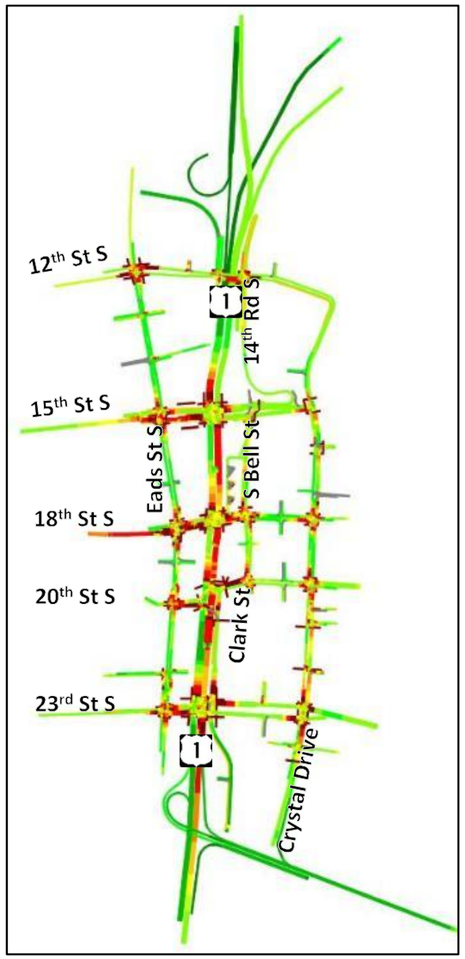
Sensitivity Analysis Speed Comparison – Using Existing (2019) AM Peak Volumes



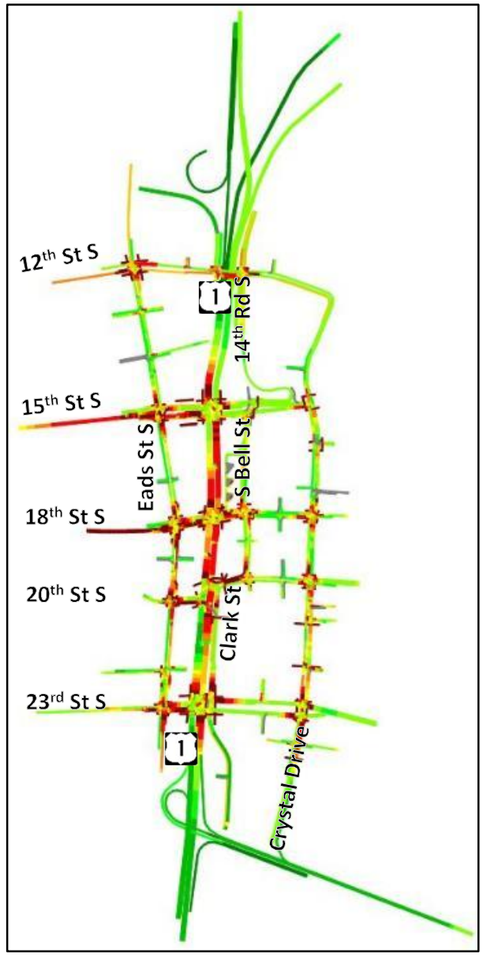
Configuration: Existing (Elevated)
Volumes: Existing (2019)



Configuration: At-Grade Option 1
Volumes: Existing (2019)

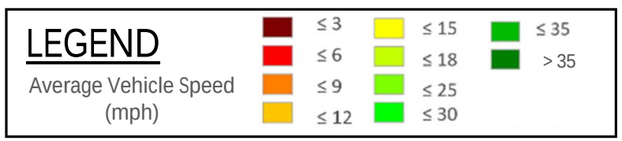


Configuration: At-Grade Option 1
Volumes: Existing (2019) and 20% Reduction



Configuration: At-Grade Option 1
Volumes: Existing (2019) and 30% Reduction for Route 1 North/South Traffic Only

- At-grade concept - traffic challenges remain under 2019 existing volumes
- Reducing all traffic volumes improves mobility more than just reducing Route 1 through traffic volumes
- Key movements to manage traffic demand:
  - Through Route 1 traffic
  - Eastbound 15th Street and 18th Street left turns onto Route 1 northbound
- Option 2 operates similarly to Option 1 with slightly worse operations on side streets
- Option 3 operates similarly to Option 1 with slightly worse operations along 15th Street and slightly better operations along 18th Street



VDOT

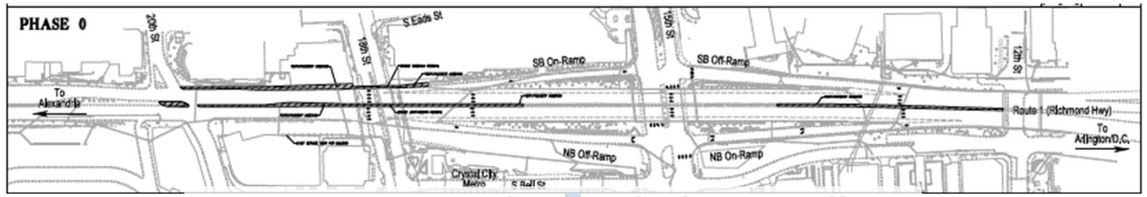
Potential Separate Pedestrian Crossing at 18th Street

Separate Pedestrian Crossing Over/Under Route 1

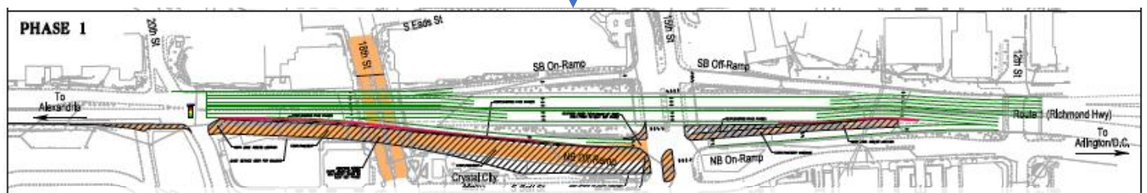
- Further study of a separate pedestrian crossing over or under Route 1 at 18th Street is recommended in response to public comments
- Possibilities:
  - Pedestrian underpass between 15th and 18th Street
  - Pedestrian tunnel connection to the Crystal City underground network
  - Pedestrian bridge over Route 1 at 18th Street
- Issues to be examined: cost, aesthetics, constructability, usage, maintenance, accessibility

Constructability

Maintenance of Traffic – At Grade Option



Preparatory work at existing medians



Preparatory work utilizing Clark St overpass footprint

Switch NB traffic to at-grade on temporary roadway & SB traffic to existing elevated NB lanes

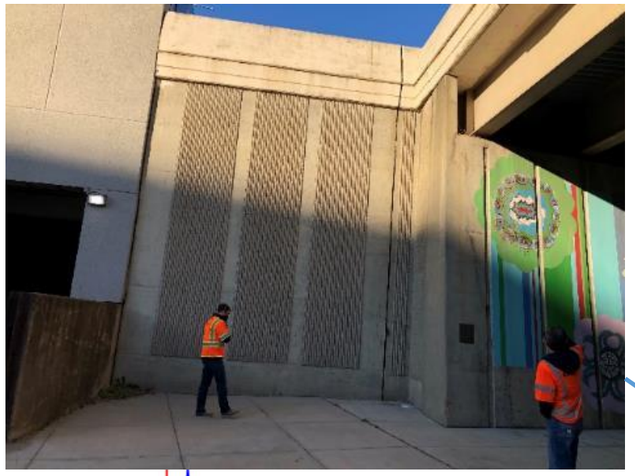
Demolish elevated SB lanes & build SB at-grade lanes

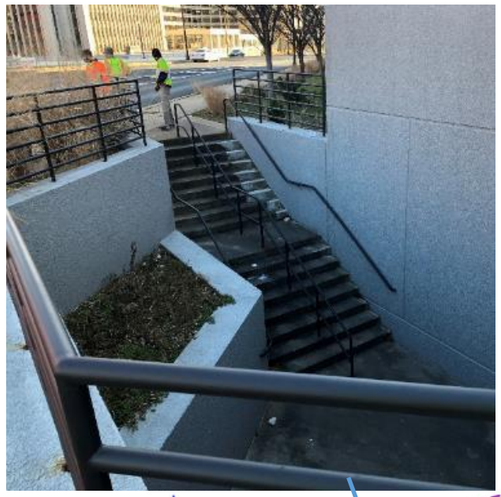
Demolish elevated NB lanes & build NB at-grade roadway

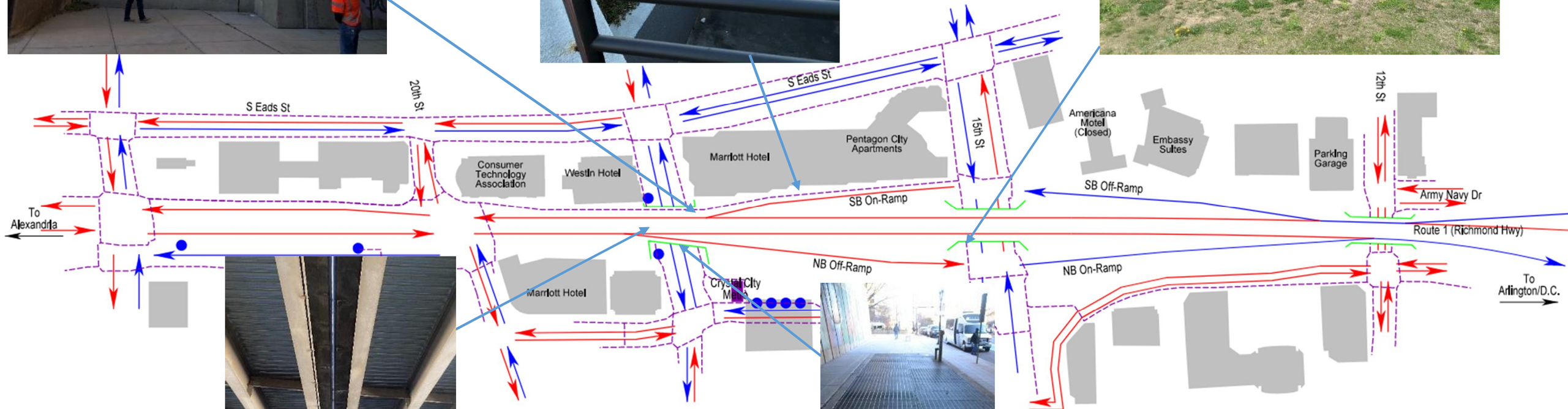
Build sidewalk/pedestrian zone between 23rd and 20th St, 15th and 12th St

- Pedestrian/bike traffic maintained on parallel routes & at crossings
- Elevated option is similar – 6 phases and utilizing Clark St footprint – but more complex due to bridges and retaining walls

Constructability Challenges





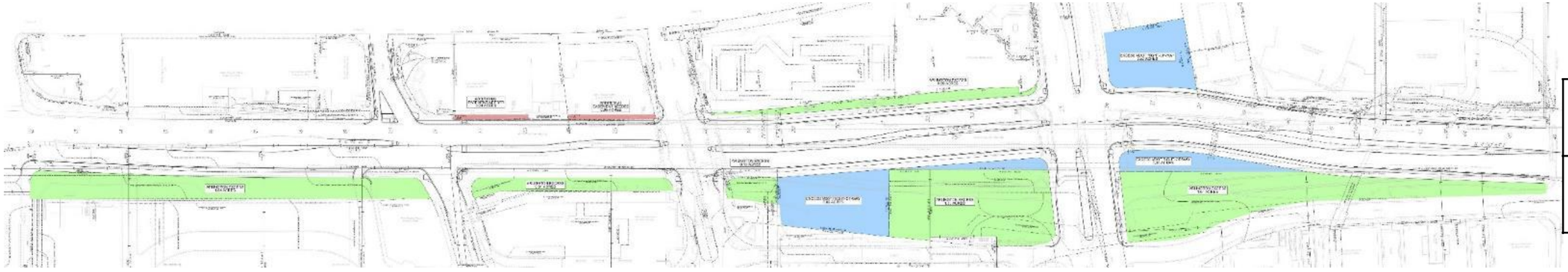


- Pedestrian/bike traffic maintained on parallel routes & at crossings
- At-Grade and Elevated options are similar – 6 phases and utilizing Clark St footprint
- Elevated option is more complex due to bridges and retaining walls
- Existing underground utilities will be relocated into the Route 1 right of way

Right of Way and Utilities

Comparison of Right-of-Way (RW)

At-Grade Concept



Potential Excess RW	6.41 Ac
Easement Need	0.09 Ac

Sector Plan Concept

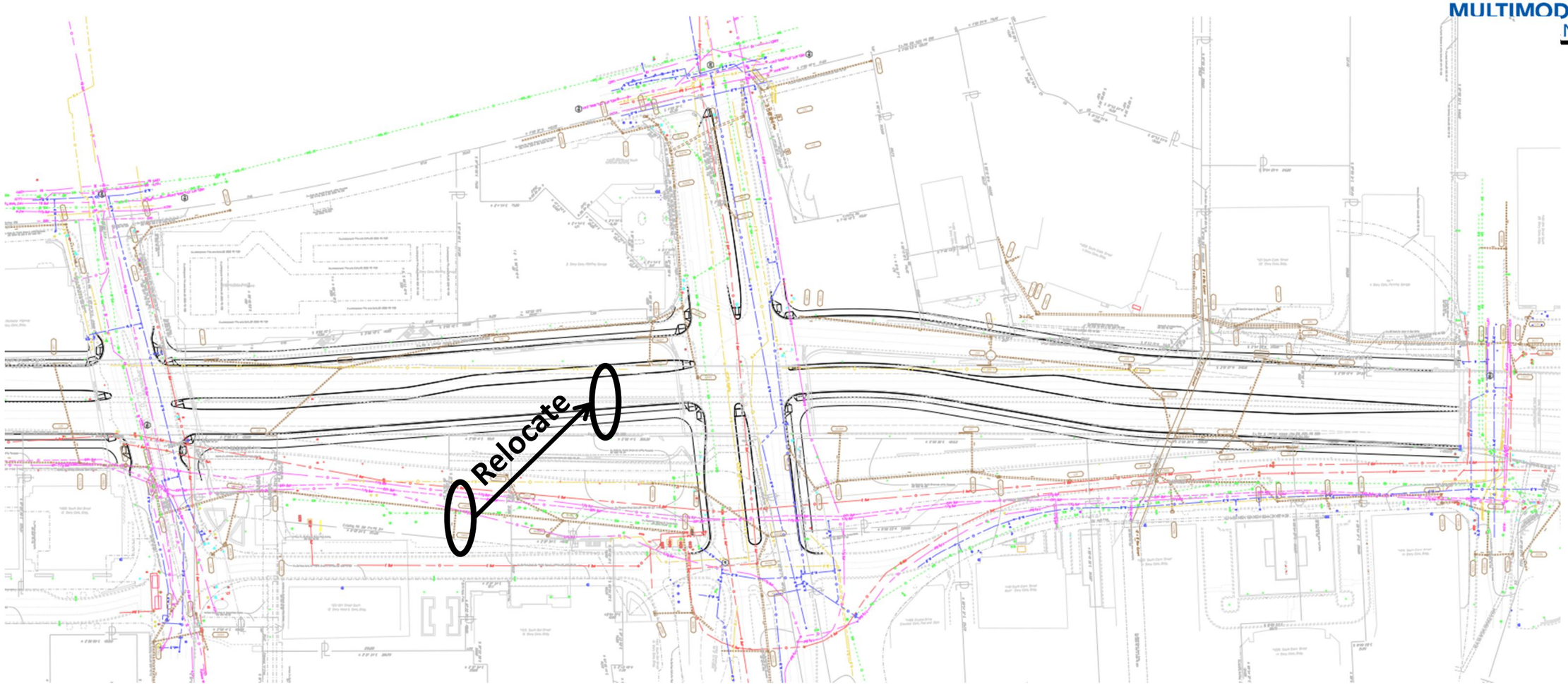
Potential Excess RW	5.15 Ac
Easement Need	0.09 Ac

Potential Excess Arlington RW

Potential Excess VDOT RW

Easement Needed for Route 1

Relocation of Utilities



Existing underground utilities in the footprint of the former Clark St overpass to be relocated into the new Route 1 right of way

Project Cost, Comparison of Options, and Recommendation

Estimated Project Cost

Option	Estimated Cost
Existing Configuration w/ Improvements	$5 – 15 million
At-grade Urban Boulevard	$180 million
Elevated Urban Boulevard	$260 million

Major Cost Item	Conceptual Cost (2021 Dollars)	
	At-Grade Concept	Sector Plan Concept
Pavement / Sidewalks	$ 9,200,000	$ 13,300,000
Earthwork	$ 18,500,000	$ 7,000,000
New Bridges/Bridge Removal	$ 4,900,000	$ 32,200,000
New/Upgraded Retaining Walls	$ 11,600,000	$ 28,800,000
Stormwater Management	$ 15,000,000	$ 14,500,000
Utility Relocations	$ 15,000,000	$ 15,000,000
Maintenance of Traffic	$ 16,800,000	$ 18,000,000
Ramp, Stairs, and Elevators	$ 1,920,000	$ 5,600,000

Measures of Effectiveness Comparison

Scenario	Safety (Crashes)	Walkability	Bikeability	Transit Effectiveness	Vehicular Traffic Ops	Pedestrian Ops/Safety	Shift in trips to non-auto modes	Cost	Constructability	ADA Considerations	Urban Fabric	Redevelopment Potential	Adaptability	Environmental Impacts	Maintenance
Modified Existing	◒	○	◒	○	○	○	○	◒	◒	○	◒	○	○	○	○
At-Grade	◒	●	◒	●	●	◒	●	◒	◒	●	●	●	●	◒	●
Sector Plan Concept (Elevated/Rebuilt)	◒	●	◒	○	○	○	○	●	●	◒	◒	◒	○	◒	◒

● ◒ ○ ◒ ●

Better < < < < < > > > > > Worse

Measures of Effectiveness Comparison

Scenario	Safety (Crashes)	Walkability	Bikeability	Transit Effectiveness	Vehicular Traffic Ops	Pedestrian Ops/Safety	Shift in trips to non-auto modes	Cost	Constructability	ADA Considerations	Urban Fabric	Redevelopment Potential	Adaptability	Environmental Impacts	Maintenance
Modified Existing	◔	○	◔	○	○	○	○	◒	◒	○	◔	○	○	○	○
At-Grade	◒	●	◔	●	●	◒	●	◒	◒	●	●	●	●	◔	●
Sector Plan Concept (Elevated/Rebuilt)	◔	●	◔	○	○	○	○	●	●	◔	◔	◔	○	◔	◒

Better < < < < < > > > > > Worse

Measures of Effectiveness Comparison

Scenario	Safety (Crashes)	Walkability	Bikeability	Transit Effectiveness	Vehicular Traffic Ops	Pedestrian Ops/Safety	Shift in trips to non-auto modes	Cost	Constructability	ADA Considerations	Urban Fabric	Redevelopment Potential	Adaptability	Environmental Impacts	Maintenance
Modified Existing	◒	○	◒	○	○	○	○	◒	◒	○	◒	○	○	○	○
At-Grade	○	●	◒	●	●	○	●	◒	◒	●	●	●	●	◒	●
Sector Plan Concept (Elevated/Rebuilt)	◒	●	◒	○	○	○	○	●	●	◒	◒	◒	○	◒	◒

Better < < < < < > > > > > Worse

May be improved with separated pedestrian crossing

Measures of Effectiveness Comparison

Scenario	Safety (Crashes)	Walkability	Bikeability	Transit Effectiveness	Vehicular Traffic Ops	Pedestrian Ops/Safety	Shift in trips to non-auto modes	Cost	Constructability	ADA Considerations	Urban Fabric	Redevelopment Potential	Adaptability	Environmental Impacts	Maintenance
Modified Existing	◒	○	◒	○	○	○	○	◒	◒	○	◒	○	○	○	○
At-Grade	○	●	◒	○	○	○	●	◒	◒	●	●	●	●	◒	●
Sector Plan Concept (Elevated/Rebuilt)	◒	●	◒	○	○	○	○	●	●	◒	◒	◒	○	◒	◒

May be improved with effective TDM strategy

● Better < ◒ < ○ < ◒ < ● > Worse

Measures of Effectiveness Comparison

Scenario	Safety (Crashes)	Walkability	Bikeability	Transit Effectiveness	Vehicular Traffic Ops	Pedestrian Ops/Safety	Shift in trips to non-auto modes	Cost	Constructability	ADA Considerations	Urban Fabric	Redevelopment Potential	Adaptability	Environmental Impacts	Maintenance	Consistent with National Landing Vision?
Modified Existing	◔	○	◔	○	○	○	○	◔	◔	○	◔	○	○	○	○	X
At-Grade	○	●	◔	○	○	○	●	◔	◔	●	●	●	●	◔	●	✓
Sector Plan Concept (Elevated/Rebuilt)	◔	●	◔	○	○	○	○	●	●	◔	◔	◔	○	◔	◔	✓

May be improved with effective TDM strategy

May be improved with separated pedestrian crossing

Better < < < < < > > > > > Worse

Recommendation – At-Grade Route 1

- An at-grade configuration for Route 1 provides most desirable characteristics that meet the multimodal and community vision for National Landing
  - Needs a comprehensive and effective TDM strategy that reduces future traffic volumes 20% to 30% below existing (2019) volumes
    - reduce future congestion
    - reduce future diversion of traffic to local/regional roads
  - Option 3 recommended: At-grade configuration with all turns at 15th Street and no left turns at 18th Street
  - Further study needed for separate pedestrian crossing over or under Route 1 at 18th Street in addition to at-grade crosswalks

Next Steps

- Receive public comment
- August – draft report
- September – final report
- Phase 2 Study – possibilities are:
  - Post-COVID traffic counts/analysis
  - Pedestrian overpass configuration
  - Expand analysis of Option 3 (all turning movements at 15th St and no lefts at 18th St)
  - 5% plan development
  - Travel Demand Management (TDM) Strategy Development

How to Submit Your Comments

Comment Form

Give feedback on the virtual public information meeting in the following ways by July 12, 2021

Email Us

route1multimodalstudy@vdot.virginia.gov
Please reference
"Route 1 Multimodal Study"
in the subject line

Mail Us

Mr. Dan Reinhard, P.E.
VDOT's Northern Virginia District
4975 Alliance Drive
Fairfax, Virginia 22030

Comment

Online at
virginiadot.org/route1multimodalstudy

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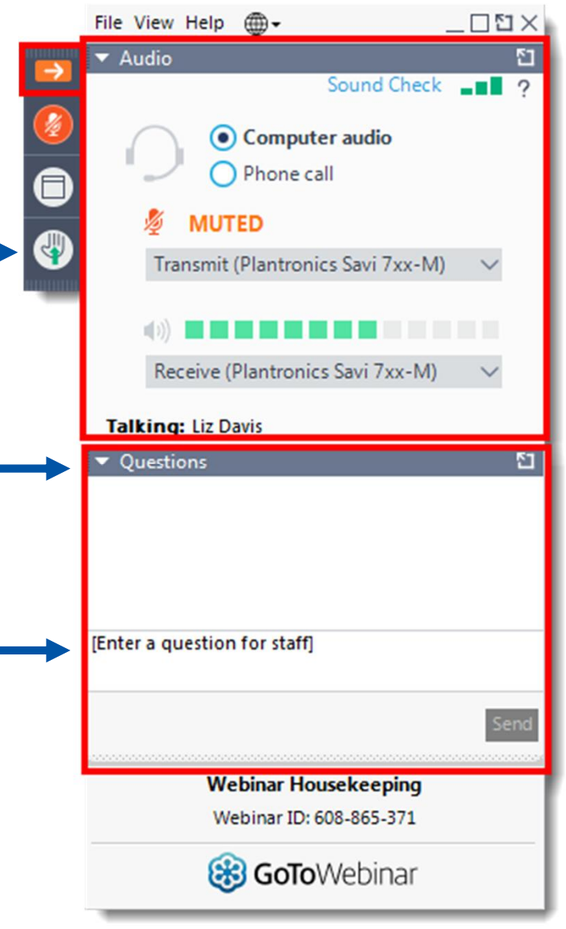
- If you want to ask an oral question, raise your hand and unmute yourself
- If you want to write a question
  - Expand the Questions Box
  - Type in *[Enter a question for staff]* to ask a written question
- All participants are muted
- If you get disconnected, please attempt to rejoin the meeting



Desktop View

Route 1 Multimodal Improvements Study

Public Information Meeting No. 3

Virtual via GoToWebinar

June 16, 2021

VDOT

THANK YOU!